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ADDRESS.

ADDRESS ON GENERAL MEDICINE.

Read at the Meeting of the Mississippi Valley Medical Association, held at Indianapolis, Ind., Oct. 12, 1893.

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Mr. President:—I purpose to call attention to four points in general medicine that seem to me to deserve a rehearing, more familiarity with which, I think, promises us higher satisfaction with ourselves and larger usefulness to our clients. These points are:

Progress of preventive medicine; biological law in its relation to medical science; cell place and power in structure and function; mind influence in pathology and therapeutics.

On these points I present my individual views; I am not a teacher nor an expert student, have no authority to speak *ex cathedra* and do not assume it.

PROGRESS OF PREVENTIVE MEDICINE.

Preventive medicine in its wider sense includes all measures to maintain health instituted under hygienic regulations and sanitation, but I shall content myself on this occasion by reference to the management for the suppression of contagious diseases.

ON CHOLERA PREVENTION.

Ten years ago the only known means of preventing the invasion of any country or city by cholera was to exclude every person and thing contaminated by the germs of the disorder. In 1884 cholera was epidemic and severe in Egypt, and was soon transported to southern Europe. Germany, England, France and Italy each appointed a commission of practical medical men and expert bacteriologists to inquire into the nature of the malady, and devise means of prophylaxis. No better illustration of the rapid progress of preventive medicine and the manner of that progress can be desired than a study of the methods of investigation pursued by those commissioners and the formulated results of their labors. Their investigations began in Egypt, continued in Europe and were completed in India, where cholera has its continuous renewal and perpetual home. The results of their labors were not entirely harmonious at first, but the unequaled Koch, at the head of the German commission, made a detailed report of the work and established the facts, the accuracy of which has been conceded by all parties.

Accordingly, we now know that the cholera germ is the spirillum choleræ Asiaticæ—commonly called the comma bacillus of Koch—that it is found in the human body only in the intestines of its victims where it multiplies rapidly; that it is not communicated directly from person to person, but the alvine evacuations of the victims find their way, generally through water, into the bowels of susceptible persons, who then become additional victims; that this germ also finds a breeding place in damp soil and in stagnant pools and in running streams containing organic matter, and survives in pure water but does not multiply there; that it is virile only within narrow thermal limits; that it holds its life by a frailer tenure than any other equally prolific and destructive pathogenic spirillum, being quickly destroyed by the official germicides, by drying, by acids, and by a temperature below 56 degrees or above 126 degrees Fahrenheit.

It is the application of this exact knowledge that has confined the cholera to the quarantine dominions at New York, thus preventing its diffusion in the United States; and it is a like application of this knowledge that has, on sundry occasions and at divers points in England and on the continent, enabled the authorities to confine the Asiatic plague to the single case in which it was discovered. And, per contra, it is ignorance of these established facts, or failure to use them, that permits the ravages of cholera at this time in Arabia, in Russia and on the shores of the Mediterranean.

Every practitioner of medicine in this country should feel it an obligation to constitute himself a propagandist of the knowledge of the means of prevention of cholera among the populace, and when the people are thoroughly informed in this behalf and join intelligently and heartily with the health authorities in recognizing and managing the first case that may appear in any locality, the disease will be stamped out at that point and then cholera can never again become epidemic in the United States.

YELLOW FEVER.

Yellow fever is another scourge that has been and still is being much studied, not with such satisfactory results touching the nature of its course as with cholera, but enough has been determined in regard to its nature to warrant the declaration that it can be stamped out at any point where it may appear. All that is necessary to protect us from further invasion of yellow fever is the watchfulness, the intelligence, the skill and the devotion to duty everywhere that has been so successfully exercised for eight years by the health authorities at New Orleans,

It is known that yellow fever is an exotic in the United States, and that it comes to us almost exclusively from the inter-tropical islands and mainland on the eastern border of the Western Hemisphere, and it is a reasonable anticipation that the diligent expert investigation now actively prosecuted will presently yield us such knowledge of the nature of its germ and its nativity, as will enable us to strangle it in the place of its birth. The pregnant idea of dealing with germ diseases, that have a local-

ized origin, at the point of their generation was under consideration by the Pan-American Medical Congress at its first session in Washington in September, and it is just such great orgaizations as that, composed of men with enlightened minds, and courageous natures, that will work out the problems of sanitary science and art for the welfare of the world.

So far, we have considered prevention of disease on the line of keeping the susceptible people from coming in contact with the germs of disease, but there is another phase of prophylaxis equally important, namely, preparing people artificially, so that although they come in contact with pathogenic germs, they will be able to resist them and suffer no ill, i. e., render people immune against contagious disease.

The most notable example of this is the fruit of the acute observation of Dr. Jenner in discovering, about one hundred years ago, that milkmaids who contracted cowpox were immune from smallpox; and the AMERICAN MEDICAL ASSOCIATION has done itself honor in providing for a Jennerian centennial celebration in May, 1896.

The name of Pasteur need but be mentioned to recall the work he has done in the last decade, by virtue of vaccination against rabies in man; and inspired by the genius and success of Pasteur many experimentalists in recent years have essayed to render people immune against cholera, yellow fever, etc., by hypodermic injections of special cultivations of these germs respectively. None of these efforts have, however, succeeded.

A closely related line of experiments has been most diligently pursued by quite a list of distinguished investigators, in various parts of the world, based upon the theory that it is possible to produce, artificially, such a condition of the human system as exists after an attack of smallpox, scarlet fever, whooping cough or other contagious disease that attacks man but once. Assuming that during an attack of such a disease there is something added to the system or subtracted from it, that renders it perpetually immune to that disease, the effort has been made to establish this immunity by making an equivalent change in the system by artificial means, that would not endanger life nor create serious suffering. It will be observed that this is but a slight modification of Jennerian vaccination, closely related to Pasteur's arrest of rabic intoxication, and not remote from the idea involved in the original claim for Koch's tuberculin. Encouraging progress has been made through experiments on the lower animals, but nothing definite has been accomplished in man.

The concept in the premises may be illustrated by reference to what has been done to simplify and extend the Jennerian vaccination. Dr. Sternberg took the blood serum of a heifer that had had cowpox, and injected it into the system of a heifer that had not had cowpox, and thereby rendered the latter immune from cowpox, as was demonstrated by control experiments.

From the result of this experiment, the inference is drawn that if the blood serum of a person who has had smallpox should be injected into the body of a person liable to smallpox, the latter would thereby become as immune against the smallpox as was the person from whom the blood serum was extracted. If this inference be well taken, it would seem to justify the broad generalization that we are approaching the time when we may be able to render man immune against all diseases to which he is only once liable. To accomplish this, however, even if it be within the limits of human effort, will require further study into the nature and function of ptomaines and leucomaines, toxines and anti-toxines, further allusion to which is not within the purview of this address.

BIOLOGIC LAW.

I submit this broad and comprehensive proposition, namely: in the origin of man and in his development through his savage state, the Stone Age, his cave dwelling career, and up to his present enlightened status, every step has been taken, and every advance has been accomplished, in obedience to a law impressed upon matter in the beginning by the Creator. This law is absolute and unvarying; it is the universal law of living things, known as the law of vitality.

It has not been given to man to arrest, to abridge, to extend, or even to modify the law of vitality, but man has been given the power to change its application and direct its force even more strongly in a selected direction, and to soften its impulse in other directions, and this man may do to such an extent that the inexpert observer, and the illogical reasoner, may honestly conclude that the old law has been modified, or a new one made, but not so; in every instance when a new law of vitality has been announced, and the search light of scientific modes of collecting related facts and the inductive method of using them has been followed, the most obscure mystery has been found but a heretofore unobserved modification of the application of the normal law of vitality.

A recognition of the universal law of vitality, as it applies to man, is the soul of scientific medicine, and the full service of science in medicine is to study the seemingly endless manifestations of vital law under diverse environment, and how its operations may be turned this way or that to ward off illness, to cure disease and to modify human suffering.

It is not the duty, nay it is not even the privilege, of the true physician to question why the Creator in the plenitude of His omniscience exercised His omnipotence by impressing matter so that, in the presence of a certain environment, a limited number of the elements of the earth should combine and enter upon a new order of motion, known to us as vital activity in its simplest manifestation, and by orderly appreciation of substance and differentiation of force develop into man, rather than by an exercise of cataclysmic power have created man as he is to-day. The *why* of what the Creator has done, is not a legitimate inquiry for the physician—it is the fullness of his mission to study the *how* of what has been accomplished.

EVOLUTION AS LEGIBLE AS PRINT.

But how do we know that man has attained his present estate, the highest exhibit of creative power, step by step, from primitive protoplasm?

The Creator has written the history of the origin and progress of vitalized matter in the rocks and their débris; in the ocean and its fauna and flora; in the rivers, their eroded channels and their deposited silt; in the wrinkles of the crust of the earth

we know as mountains; in the fossils and the bones of extinct animals; in the preserved carbon of our coal beds; and in the living things that to-day inhabit the land, the sea and the air. The history thus written is as legible as print, and as veritable as the history of astronomy, by which we can predicate the eclipses and occultations of the planets for a thousand years, as surely as we know there will be an eclipse of the sun next Monday.

This development, from primary protoplasm to man, has been without arrest or shadow of turning, steady as the movements of the solar system, and to him who will reverently follow its progress there shall come a joy as satisfying and more real than the alleged music of the spheres.

There is no pretense that this harmony is recognized by every one who is called doctor; there are sciolists who practice medicine and practice a good deal of it, who honestly think they see in individual disease under certain circumstances; in localized epidemics and in the great waves of contagious disease that periodically enwrap the world, a wide departure from the law of human existence, as predicated by a beneficent and loving Creator. But while earthquakes and tornadoes, floods at one time and drouths at another, waste the products of the husbandman's labor and rob the people of proper sustenance, and we acknowledge the Creator as the giver of the law that brings seedtime and harvest, governs the movements of the earth, and regulates all meteorological changes, we need not waste time to discuss the point with the pseudo-scientist, but turn him over to the logic of the poet who declares:

"All nature is but art, unknown to thee;
All chance, direction, which thou canst not see;
All discord, harmony, not understood;
All partial evil, universal good."

CELL PLACE AND POWER.

As already intimated, the immediate foundation of all living things is protoplasm, and I may now add that the cell is the primary form of organic life, and is properly recognized as the unit of vitality.

A single cell was the earliest form of organized matter and it possessed the attributes of selecting food, digesting and assimilating it; developing itself and propagating its kind. These are substantially all the attributes exercised by the highest organizations, albeit the wide difference in the manner and extent of the manifestations of these attributes sometimes requires the acumen of the trained scientist to recognize the major as nothing more than an amplification and differentiation of the minor manifestations. Present knowledge authorizes the declaration that all living things are single cells, or an aggregation of cells, with the products of cell metabolism or catabolism.

The history of vitality already recited, teaches that the first cell was a vegetal organism, complete in itself, and an essential condition precedent to the next step in advance, i. e., an organism of two cells; and this the progenitor of all subsequent organisms of more and more cells, presenting every conceivable form, glowing with every prismatic color and all possible combinations thereof, luxuriant in leaf, in flower and in fruit beyond the highest soaring of the human imagination, and to a size culminating in the sequoia gigantea, the great redwood tree of the snowy Sierras of California, all cells; the simplest a single microscopic cell, the largest but a countless aggregation of cells.

It is worthy the attention of the student of scientific medicine, that all this extensive, varied and imposing development of vegetation is accomplished without the slightest hint of a nervous tissue.

The primal vegetal cell had made but limited advance when the environment, changing the application of vital force, produced a new feature in the cell organization that constituted the initial link in the great chain of the animal kingdom, quite as extensive, fully as variegated and more wonderful than the vegetal kingdom. The first animal was the similar of the first vegetable, in being a single cell, and the order of the development of the higher animal from a protozoa was identical with the development of the higher vegetation from the protophyte; and this fact is the clinching testimony that the Creator has but one way of building living things, of low or of high degree, and that is through the agency of the cell, the unit of vitalized matter.

Accordingly, we find that the present man perpetuates his species through a cell, the counterpart of the protozoa in which he originated. But in this sense man is a compound being, consisting of male and female, and for perpetuating the human race neither has any virtue without the other. The female in our climatic and other surroundings prepares, secretes, say 400 germ cells during the thirty years of her menstrual functioning, but these cells have no possibility of reproduction without encountering the sperm cells of the male who, in the sixty years of his virile power secretes millions of them, all waste material, except the few that meet the germ cells of the female in the interior of her organs of generation when, in such an event, there is not a simple embrace or union of the two, but an actual conjugation of them, each sacrificing its own individuality to constitute a new cell, having in it the potentiality of a human being.

The conjugated cell receives no additional powers or attributes; the act of conjugation completes all that is necessary to reproduce the likeness of its parents, except nutrition, and this the mother's womb furnishes and contributes nothing else. The conjugated cell at once starts on its career of development and in nine months has traversed substantially all the stages the protozoa passed through in the eons it occupied in developing into man. The story of cell place and power would have no pertinence to the service I have been called to on this occasion, if it were not that every pathological condition that besets the human organization is nothing less nor more than a disturbance of the normal activity of a few, or many of the cells of which it is composed, and when this pathological activity proceeds no further than to create error of function, the whole service of the medical attendant is to remove the cause or render the tissues insensible to its presence; and where the disturbing cause becomes a destructive agent, producing molecular death of a part, the sole reliance of medical science and art is to cultivate cell growth to fill up the void and reëstablish the continuity of the tissues. The full recognition, by the medical fraternity, of the entirety of the rôle of the cell in human economy will be an event to be marked by a white stone. Upon such recognition the future of medicine depends for rapid progress and true results.

MIND INFLUENCE.

I may be doing my professional confrerés an injustice by entertaining the thought, but I have a loose conviction that the influence of the mind over the physiology, the pathology, and the therapeutics of the body is less thoroughly understood, more inadequately appreciated and consequently more mischievously neglected than any other department of the healing art.

The imagination will not only convince a man that he is ill when nothing is wrong but his imagination itself, but it will frequently magnify a slight ailment into a fancied fatal distemper, and a physician who does not discern these relations, or discerning treats them as a bagatelle, falls short of the obligations of his calling and fails in duty to his patients. Much of the shortcoming in this department is probably due to the absence of a clear, concise and satisfactory definition of mind and of its relations to and association with, the nervous organization. But the lack of exact knowledge on these points need not and should not prevent us from recognizing what is conspicuously plain to all who choose to observe and appreciate the constant phenomena of human life, namely, that the measure of the sanitary condition of every individual is the sum of his physical and psychical activities. No man is well who thinks he is ill, and per contra, a man may have serious disorder of his physical organization and yet imagine his health perfect. The laconic definition of a well man is "a sound mind in a sound body."

Beyond all peradventure, there are a considerable number of disorders in a limited class of people that can be relieved by so-called Christian science. A disordered mind is as much a pathological verity as an inflamed lung. A patient who believes he has a definite organic disease that he does not have is, nevertheless, out of health, but the disorder is in his mind not in his flesh, and will be restored as quickly, perhaps more quickly, by a qualified faith healer than by the most accomplished disciple of Esculapius. Even where disease has been diagnosed and can be successfully managed only by medicaments, it must have been within the experience of every practitioner of even a few years' service, that a large pecentage of the ailing will progress more satisfactorrily if the patient has full faith in all that is said to, and done for him. If to these patent facts we join the pregnant one, that many persons with diseases, even acute ones of alarming presence, will be restored to health by natural processes without medicines, the assertion that persons claiming to be dangerously ill and recovering under the management of so-called spiritual healing does not authorize the conclusion that the patient did not have threatening disease, nor does such recovery warrant the claim that the treatment was influential in the cure.

All physicians are familiar with the nature and severity of the grosser developments of hysteria, but it should be fully recognized that from these typical cases there is a diminishing series to a vanishing point, and that the milder members of this series, while frequently independent, are perhaps more frequently complications of disorders not belonging to the neuroses, but which not only embarrass the practitioner in diagnosis and therapeutics, but induce him to administer perturbating medicaments where patience and placebos were the true remedies. Indeed, it is just here where the professional sins of both omission and commission in daily routine practice reach their most abundant mischievous results.

Much of the perplexity of comprehending the influence of the mind on the body, in all its vital operations is remedied, where one has acquired his knowledge of the nervous system through study of its physiology with a minimum of attention to its anatomy; and in this study made no attempt to unravel the complicated service of the encephalic ganglia in man until he has reached that highest evolution of the nervous system after inaugurating his study by a comprehension of its shadowy appearance in the protozoa, and following up its development, step by step, through all the links of the chain of changes from the protozoa to man. By this line of investigation, much of the obscurity in the functioning of that part of the nervous organization peculiar to man, and especially of the gray matter of the cortex of the cerebral hemispheres which is the chief organ of the mind, is removed.

To one thus equipped, the mystery of Christian science, of faith cures, of spiritualism as a medicine, of witchcraft, of mesmerism, of hypnotism and similars, is dispersed and leaves a mind thus clarified to walk the way of scientific medicine, cleared of the nebulous mists that hinder and of the clouds of doubt that confuse.

To accept the vagaries of the professors of these occult arts is only to a degree more unwise than to deny or deride all foundation for them. Both science and clinical experience, as well as common observation, confirm the existence of a varying psychic state under diverse names including spiritualism, mesmerism and hypnotism. It is the reasonable duty of the scientific physician to winnow the two grains of truth from the two measures of nonsense in which honest ignorance and unscrupulous chicanery has enveloped it. In this direction, Mr. Ernest Hart has done a most excellent service, by investigating the hypnotic teachings illustrated by marvelous frauds in the great Paris Hospital of La Charité, conducted by Dr. Luys of world-wide notoriety. Within the current year, Mr. Hart has presented in detail his method of investigation and its results, published in a thin volume in London, which has been reproduced in this country by the Appleton's of New York. To persons who have only a hazy view of hypnotism, and to others who see it in full light but enjoy a cutting scientific exposure, without malice, of a charlatan who has long posed before the world as an exalted scientist, this little book will be a boon.

I have covered my points, consuming my allotted time. If I have seemed dogmatic the occasion offered opportunity for nothing more.

Resumé:—If I have been successful in an effort to make myself intelligible you will understand me to hold:

1. That there is rapid progress in preventive medicine; that its present advanced status is highly appreciated; and that we may confidently look for yet brighter results in the near future.

2. That our present concept of the complicated organization of the human body is based on the theory that the Creator, in the beginning, endowed vitalized matter with a perpetual law by virtue of which man has been developed, step by step, from primitive protoplasm.

3. That there is no longer dubiety in the proposi-

tion that the cell is the unit of vital activity, and that all living things are a single cell or an aggregation of cells and cell products.

4. That the influence of mind on vital activities, normal and abnormal, is not recognized as it should be; and that there is a line of study that would if properly pursued, dissolve the agnosticism that has in the past embarrassed a knowledge of the reciprocal relations of matter and mind.

Doubtless you are ready, from sentiments herein expressed, to class me as an optimist, but I hope I am a reasonable optimist, holding my position consonant with demonstrated facts; an optimism that comes of attention to the progress of science, confirmed and brightened by my intercourse with my confrerés under the best possible circumstances, namely, meeting them in great, enlightened and cheering associations like this.

ORIGINAL ARTICLES.

METHODS OF TEACHING CLINICAL MEDICINE.

Read before a Pedagogic Section of the Pan-American Medical Congress, Washington, September, 1893.

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Whether there is anything perfect in this world, I do not know. That it is possible to improve the teaching of clinical medicine in this country, at least, I feel quite sure; at the same time, also, I recognize the advance which is certainly making, and am convinced that this will continue. We believe that the best is none too good for us, and propose to have it. To hasten and secure progress in the future it is well to understand and consider the past, and the lines along which evolution has worked to bring us where we are. We must also bear in mind the local conditions, with the advantages and disadvantages which they entail. The problems are, to make the best of what we have got, to get more, and gradually to surmount the bars to progress, whether these are accidental or inherent in the spirit and institutions of the country.

It is easy enough to see the advantages of governmental control of the higher education, as exemplified in European countries. Professors are government officers; hospitals and laboratories are built and maintained by the State. All the parts which go to make a complete medical school should therefore work together like the parts of a machine, well oiled by National appropriations. But it is not likely that we shall see any general adoption of this system, or anything similar to it in this country, even if it were desirable that we should.

While the town or municipality properly insists on and provides for primary education with us, intelligent private liberality must in the future, as it has done in the past, provide in the main for the endowment of advanced and professional education. Laboratories of all kinds, including hospitals, cost so much to build and maintain that no medical school can pay its bills from the tuition fees of its students, even if a self-denying and devoted faculty is willing to forego all direct pecuniary returns. It is to the honor of this country and of American public spirit that there are good medical schools, the teachers in which have, from the start, adopted this unselfish plan of devoting every cent of surplus to improving the facilities for teaching.

Without endowment it is impossible to provide all that is needed. Endowments will not flow towards proprietary schools, which are exposed to more temptation than is desirable towards a lowering or half enforcement of standards. They will, however, flow to schools which are really parts of universities; and I believe that we can rely absolutely on the intelligent private liberality of our citizens to provide all that is required. But we must make our wants known, and indicate the means by which they can be best supplied. Everything comes to him who waits.

Allow me now rapidly to touch on the beginnings of medical education in this country, and the manner of its growth:

Roughly speaking, a century ago we became an independent people, full of virile energy, and with ample opportunities for its exercise in the development of a vast and rich territory. During the Colonial days we looked to the parent country for professional education, as well as for many other things. With independence came an increased stimulus to provide more fully for ourselves. The Medical School of the University of Pennsylvania had been already started. That of Harvard began in 1783 with three professors. Other schools gradually followed. Medical education before this was obtained entirely from a preceptor, whose students compounded his pills and draughts, read such books as he had, drove about with him on his rounds, and assisted him in many ways, even to the care of his horse perhaps. For many years after the establishment of medical schools, clinical teaching remained in the hands of the preceptor. But it marked a distinct advance, when opportunities were offered to enlarge the minds of students by coming to a city and hearing the leading facts and theories of medicine set forth by broad men of large and varied experience. Clinical teaching was then wholly derived from the private practice of the preceptor; systematic and didactic teaching formed the lecture course of the medical school. The number of men who could get their professional education in whole or in part, in European capitals was very small.

The medical school was a private institution, responsible to no one in theory, though the board of trustees of eminent laymen chosen to add respectability and eclat to the enterprise, sometimes proved to be masters where they were intended to be servants. Or affiliation was sought with some existing university. But this connection was generally a loose one, the university practically doing nothing but confer the degrees on those recommended by the medical faculty. The schools were essentially proprietary. This was the case at Harvard until twenty years ago, when the union became real and organic. It is only two years since the College of Physicians and Surgeons of New York, became really a part of Columbia College.

Medical schools antedated hospitals. The largest cities in the country one hundred years ago were small, the population was practically native, and there were very few poor requiring hospital treatment. The development of hospitals in this country, practically, is included within fifty years, when the stream of immigration began to change from a brook

to a river. Medical schools being essentially proprietary, and being active only a few months in the year, hospitals were a separate foundation and grew up under separate management, a misfortune which perhaps could not have been avoided under the circumstances, but a great misfortune nevertheless, and one which still weighs heavily on the great majority of the schools of the country. Medical schools were founded by physicians; hospitals by benevolent laymen, always, it is true, with the active coöperation, and oftentimes distinctly as a result, of professional influence. But the two were under separate management, and it was natural enough that laymen should consider the introduction of students in a hospital as a drawback, rather than a help to the patients, and that they should be unwilling to hand over the hospitals to a proprietary medical school, which could give no guarantee of permanency or of reasonable freedom from selfish action.

Under this mode of hospital foundation, the service was divided up among the leading or most active medical men of the town or city. If a teacher had a service of three or four months—the duration of an old-fashioned lecture term—he was satisfied. Indeed, he, in common with the non-teachers, preferred a short term, as allowing more time for private practice, the emoluments of which he required as those of his teaching position were indirect and uncertain. Thus arose a second great drawback to clinical teaching,—a drawback which is the more felt now that the older schools undertake to furnish entirely, or in much larger measure than formerly, the bedside instruction of the old preceptor.

In a word, then, the two chief difficulties with which we have to contend in this country in developing firstrate and sufficient clinical teaching, are, the lack of complete union between medical schools and hospitals, and the system of broken hospital service. Another and incidental disadvantage is the impossibility of calling clinical teachers from other places. In the purely scientific branches, it is merely a matter of providing a salary; but the school which does not own its hospital can not provide the clinical teacher with a hospital service.

It will, of course, be understood that I am speaking broadly. There are schools in this country which own their own hospitals and can regulate the terms of service therein. But I think I am safe in stating that, with the possible exception of McGill University in Montreal, there is not a single one of the leading schools which absolutely controls sufficient clinical material for the methods of clinical teaching which prevail at present, much less for such methods as we should aim to follow in the future. The Johns Hopkins will start with a clean slate, on a proper system, and with every facility for the best and most thorough clinical instruction. All friends of medical education must watch its course with the greatest interest. Its success must stimulate other schools to make more of the advantages which they possess, and must strengthen their hands in the struggle to secure those which they lack.

It must be added, that in spite of the disadvantages under which we labor in this country, as a whole, the practical working of things is not so bad as might be expected. The laymen who manage private and endowed hospitals are enlightened men, as a rule, and are realizing more and more that the interests of their sick charges, as well as the reputation of their hospitals, are subserved by the instruction which is carried on within their walls. And I can see a current setting toward a diminution in the size of the staff and a consequent lengthening of the term of service.

There is much more that might be said—and doubtless better said—on this broad theme of the relation of medical schools to universities and hospitals. It is a fundamental question. If we can secure and control further opportunities for clinical teaching, the subsequent details present no special difficulty.

To a brief consideration of these details I must now pass on. I do not know where and when the first Chair of Clinical Medicine, independent of that of Theory and Practice, was established in this country, and this little paper is written far from any medical center or books. It is rather less than forty years since the Chair was founded at Harvard, and my father was its first occupant. Since this time the increase in the amount of clinical instruction has been, on the whole, steadily progressive. In the twenty-five years which have passed since the writer began to study medicine, the number of exercises per week in clinical medicine have been multiplied several times; and the four years' course, the success of which must depend largely on clinical opportunities of all kinds, is bringing still further increase in amount with, it is hoped, some corresponding improvement in method.

The clinical lecture to large classes in the amphitheater, which marked the commencement of instruction in clinical medicine, maintains and always will maintain a place. Much instruction can be imparted in this way, with economy of time to the student and of teaching force to the school. However careful and ample the drill of the individual student may be made, I believe that the clinical lecture will survive. During a year a wide range of disease, as well as much of the variation of individual diseases, can be illustrated by patients drawn both from the wards and from the out-patient department. The student is thus shown methods of diagnosis and treatment; his attention is called to the changes in structure and function which disease works in the living body, and the particular case can be made to illustrate general principles. But the work is done for the student, and must be done for him, in the main. The limits of an hour, and the enlistment of the sustained interest of the class, as a whole, do not permit the drill of one or two individuals whose profit is largely at the expense of the main body. In many of the schools of this country clinical lectures to a full class are given in sufficient number and of high quality.

What, practically, all the schools need most is the clinical drill of the individual student and a close contact between student and patient. This implies a wealth of clinical material and a considerable number of instructors among whom the class can be subdivided, so that each can have the precious opportunity of observing and finding out for himself. The ward visit is a valuable means of instruction in rendering it possible to see and follow out diseases and cases of disease which can not well be transported to the amphitheater. But it is hard to make a ward visit profitable to more than a dozen students at once, and the management of an independent hospi-

tal is apt to look askance at a method which tends to increase and complicate the work in the ward in ways which it is not necessary to elaborate.

There is one feature in particular of the English system of clinical teaching, which has always seemed to the writer most admirable. Each student must serve a fixed number of months in the ward as clinical clerk, with certain cases for the care of which he is responsible under supervision, and with all the details and course of which he necessarily becomes familiar. It is thus impossible for him to enter practice without any practical experience whatever; and, what is more important, he is forced to exercise his powers of observation for himself. The identity of school and hospital make this system easily possible. And yet it has not been attempted in European schools to any extent, as far as I know. Anatomy can not be learned without dissection; chemistry, without laboratory work. Nor can clinical medicine be learned in the best way without work in a hospital ward and out-patient room.

It is possible that much use could be made of the sick poor at their homes under the charge of dispensary physicians, though there are practical difficulties in the way. I believe that along this line lies the first present necessity and opportunity for development. The recognition of the necessity is the first step toward the provision and utilization of the means.

There should, again, be primary as well as advanced clinical instruction. In the new schedule of studies under the four years' course now in operation in the Harvard school, this principle receives full recognition. The course in the second year is entirely separate from that in the third; that in the third will be more or less independent of that in the fourth year. Each student will have in his second year four hours a week, partly clinical lectures and demonstrations of semeiology and diagnostic methods; partly drill in small divisions in physical diagnosis; partly ward visits in the hospital. The general scheme for the third year is to provide more advanced instruction in the wards and amphitheater, including therapeutics, as illustrated by the case or cases in hand. In the fourth year it will be the aim to make the work as practical as possible, and give the student opportunities to apply and fix the knowledge which he has already gained, at the same time that he increases his stock by more intimate contact with disease.

Many years ago my father introduced an exercise in clinical medicine which has become popular and been adopted by other departments in the Harvard school, to which it is still, as far as I know, peculiar. It is called the clinical conference. Each student in his final year is provided with a selected case, usually in a hospital ward, though sometimes in a dispensary district. He is expected to visit and follow up this patient, and write a practical paper on the diagnosis, prognosis and treatment. A month or six weeks is allowed for the preparation of the paper, which is then handed in and which counts a fraction toward the examination for the degree. From these papers a selection is made, according to character and subject, and every week one is read by its author before the class and a number of instructors in the department. The reader is then subjected to criticism and question by his fellow students and teachers. On the preparation of these cases much pains is bestowed, and I think there can be no question that the exercise is a useful one. It is a matter of honor that the work on the case should be really that of the student himself. Under the four years' course, instead of one, I hope that each student may receive a number of cases to look up in this way.

I believe that the future is bright with promise. The progress in a century has been enormous. At first we depended almost wholly on Europe or Great Britain for a firstrate medical education. Then students crossed the water for clinical advantages in hospitals, as these were non-existent or small in this country. Then a prime inducement was the chance for laboratory work,—physiological, pathological, histological, biological. Just as our hospitals have become second to none, so will our scientific laboratories. It will always be enlarging to the mind to visit foreign schools and study their methods. But it is no longer necessary for the attainment of an excellent equipment, alike in practical and scientific medicine. We should bear in mind the fact that we have many possessors of large fortunes, who will quickly see that in no way can they so usefully and with so much credit to themselves dispose of their surplus, as by promoting medical education within, as well as outside of hospitals. But the matter must be laid before them, as it can not be expected that they should be familiar with the requirements of clinical teaching. Who is so fit to explain the matter, and who can exert more influence, than the family physician? Even if a teacher himself, he can not be considered a specially interested party if he is an officer of a university, which goes on forever, and the management of which can be depended on to administer funds intrusted to it, strictly within the purposes and wishes of the donor.

RARE FORMS OF GOUT AND RHEUMATISM.

Read before the New York State Medical Association, Oct. 11, 1893,

BY SIR JAMES GRANT, M.D., K.C.M.G.
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Mr. President and Gentlemen:—This I consider "a red letter day" in my professional life's work, and more particularly from the very fact of having received so generous an invitation, through the Secretary of your Association, to read a paper on this auspicious occasion. We Canadians, as a whole, delight in noting the advance of our American neighbors, in almost every line of thought in medical and surgical science. The assembled wisdom of this Association from the great State of New York, almost a kingdom in itself, is only an index to the intellectual power to-day at work in almost every State of your prosperous republic. How gratifying it must be to con over such names as Rush, Mott, McDowell, Sims, Gross, Pancoast, Flint, Sayre, Thomas, Emmett, DaCosta, Bowditch, Goodell, Pepper, Weir Mitchell, Bull, McBurney and a host of others equally great, but too numerous to mention, who by their skill and ability have added luster to the name of America.

To-day I propose offering some observations on rare forms of gout and rheumatism, conditions not by any means frequent as to their occurrence.

PNEUMONIC GOUT.

The following brief notes are of a pneumonic form of gout, associated with slight hepatic complication.

Case 1.—H. V., age 78 years, stout habit of body, not plethoric, but generally vigorous and accustomed to long hours of arduous official duty; can not trace gout to his ancestors and always lived well and liberally. Feb. 10, 1893, he was suddenly seized with acute pain in the right side of the chest, opposite the middle lobe of lung, with general malaise and rather severe cough. No excessive flushes in the cheeks; the breathing was somewhat hurried, about 30 per minute, temperature 101⅕ to 103 degrees, and the pulse for several days ranged from 100 to 114. The cough, after the first day, was associated with the expectoration of a thick, tenacious mucus and rusty colored; not uniform, however, in its character, but somewhat patchy as to the distribution of the blood through the tough sputum. The left side moved more freely during the respiratory process than the right, and over and about the seat of pain in right side there was an evident area of dullness on percussion and yet the breath sounds were heard with a degree of almost unexpected clearness, with an occasional slight mucous râle. The posterior aspect of the right lung held its ground, kept moderately clear and, in fact, the pulmonic trouble was chiefly confined to the lateral and anterior aspect of middle lobe and right lung. Throughout, the sputa presented an unusually tenacious character, and up to the 21st of February exhibited a patchy, rusty and most peculiar appearance, after which date it became clear, but retained the sticky, glutinous peculiarity up to the 27th of February, when it subsided. During the entire illness the pain in the side was not of the usual pleuritic type, but more of the burning, throbbing, aching and piercing pain, and out of all proportion to the ordinary defined pulmonic condition. From this well-known gouty diathesis, I was led to believe that the attack was really gouty in character, and informed the friends that metastasis to the feet of the lung condition, was not unlikely. On the 22d both feet became very painful and swollen, a condition of system (as to his feet) he had experienced several times during the past ten years. Almost immediately the lung improved in every particular, which quite settled the point as to the gouty character of this attack in the lung tissue as a primary development. Throughout, the usual course of treatment was adopted, with the free use of elixir salicylate or lithia, and lithia water as well. During the entire attack I saw no special indications of hepatic trouble beyond a degree of uneasiness about the liver generally. Four years ago he had a well defined attack of jaundice, unattended by any anatomical lesion to account for its development; it was of short duration and passed off quickly.

PERITYPHLITIC GOUT.

The same individual whose case I have just cited was the subject of the following data:

Case 2.—Sept. 10, 1892; age 77 years. Almost up to the present attack he had been enjoying apparently good health; retired to bed this same evening, and in the middle of the night was suddenly seized with a severe pain in about the region of the appendix vermiformis, attended with a sensation of throbbing, together with a degree of tension in this particular region, and which radiated more or less over the entire abdominal walls; considerable heat of skin with a degree of restlessness, general febrile disturbance, and a sense of uneasiness about the stomach with occasional vomiting. Temperature 102 degrees; pulse 116, full and regular. The pain and sensibility of the abdominal wall were chiefly over the ileo-cecal region. The bowels were constipated and the tongue moderately coated with a moist white fur, pointing to evident gastric derangement. Knowing the gouty history of this patient for some years, although not of an hereditary type, I suspected from the character of the pain—boring and gnawing, such as I had observed more than once in his feet—that it might prove a case of gout, of which there were well-defined results, such as tissue thickening about the tarsus and heels of both feet, owing to the deposition of gouty material during past years. The fingers on both hands showed also evidences of disturbed chemistry in the system, resulting in gouty thickening in and about various joints. The bowels, though at once relieved by an enema, still continued painful. Linseed poultices were freely applied, sprinkled with chloroform liniment, and tablets of sulphate of morphia freely administered, to relieve the intense suffering, which was so acute as to almost prohibit the most moderate bed clothing. Salicylate of lithia and lithia water were freely given so soon as admissible; and the bowels were frequently washed out with warm water, which almost played the part of an internal poultice. The pulse and temperature continued high for fully five days, when both gradually lessened in intensity, and about the sixth day pain was complained of in both feet, particularly about the toes, but not by any means as severe as in the marked metastasis after the attack of pneumonic gout.

At this date there was a marked amelioration in the entire character of the symptoms, the abdomen became more flaccid and much less painful on pressure, and the decidedly *cakey area* in the ileo-cecal region gradually parted with its suspicious outlook. McBurney's appendix point was for days an interesting and instructive outlook, until rendered less attractive by the evident outcome of metastatic gouty action. Undoubtedly there was well marked and circumscribed induration in the ileo-cecal area. The precise condition or character of this induration was difficult to define, and yet the rapid change consequent on metastatic action, pointed to gouty deposition in or about the region of the appendix, so peculiar and transitory in its manifestations. At the end of three weeks an excellent recovery was made, and since that date there has been no recurrence of intestinal trouble.

RHEUMATIC PERITYPHLITIS.

Case 3.—Miss T., age 12 years, vigorous and robust habit of body, conformation regular and organs, as a whole, normal prior to present attack; of a highly nervous temperament, but has usually enjoyed excellent health and spirits. June 1, 1893, complained of pain and a sense of uneasiness in her feet, with a general feeling of systemic irritability. June 3 was suddenly seized with severe pain in the bowels, but more particularly in and about the ileo-cecal region, where tenderness on pressure was most marked. Fully two days prior to June 1 a sense of heat and feverishness were experienced, and prior to being under my care. Temperature 102⅕ and pulse 120. The bowels were at once washed out by a warm water enema, which afforded much relief. Hot linseed poultices applied, and placed on milk diet and an aconite mixture. From June 2 to June 8 the pain experienced over the bowels was very considerable, and the tenderness so severe that coughing or stretching of the legs increased the pain in a most marked manner. Turpentine enemata also afforded considerable relief. June 4 there was a decided hardness, on moderate pressure, over the ileo-cecal region, which gave one the impression that some tissue change had taken place, and the fact that rigidity in the abdominal walls was more marked on the affected side than on the other, led me to view the condition with a degree of suspicion, although the actual position of hardness was a little lower down than McBurney's point. For fully three days the temperature was over 102 degrees, on which account suppuration would not be an unlikely result. June 7 the right shoulder, elbow and wrist joints exhibited well-defined symptoms of acute articular rheumatism, these parts being painful on pressure, swollen and moved with difficulty. Just in proportion as these, almost outside rheumatic conditions developed, the abdominal symptoms actually lessened in intensity, and on the tenth day the entire features of the case evidenced a marked change for the better, no relapse being experienced whatever. The question very naturally arises, What was the attack, and how developed? True, the recognition of appendicitis is not all that is needed. In this case, almost from the first, there was localized pain associated with tenderness over the region of the right iliac fossa and ascending colon, with well-defined swelling, and for days the pain was so severe that it was increased, at once by coughing or deep inspiration, and the almost constant desire was to elevate both knees to relieve suffering. For days also there was entire inability to take nourishment, owing to attacks of vomiting. The bowels were frequently injected with warm linseed tea, which afforded a degree of nourishment, as well as clearing the contents of the canal.

In the last case I concluded there was lodgment of undigested material in the cecum, and most likely induced by inability to assimilate the food, owing to deflected *nerve power from over mental strain*, as is frequently the case in our schools and universities at the present day. In the ordinary avocations of life we can trace the operations of like results, interfering seriously with the very principles of sanguinification and blood change.

The next question is, How is rheumatism associ-

ated with perityphlitis? True, the essential cause of rheumatism is still a doubted point. Errors in diet, as an etiological factor, have much to do with the production of both gout and rheumatism, and such strengthens the metabolic theory that rheumatism depends on a morbific material, produced within the system, the result of defective processes of assimilation. True, Prout, Latham, Richardson, Mitchell and Dr. William H. Porter of New York, have thrown much light on the subject of rheumatism, and certainly the present case points to rheumatic complications as the outcome of defective assimilation, an important factor in its production. Thus the chemical laboratory of the human system becomes disturbed, resulting in false products, enabling us to establish a connecting link between even perityphlitis and rheumatism. In the structure of the intestinal walls there is undoubtedly a large amount of fibrous tissue, just as in the fascia and the tendons of the joints, and it is reasonable to suppose that these structures should be influenced in the same manner. Assuming that the case under consideration was even quasi-rheumatic in its character, it affords one more illustration as to the importance of giving due consideration to the line of action embraced in medical or surgical treatment under like circumstances.

In a recent paper by A. Haig, M.A., M.D., Metropolitan Hospital, London, on "Gout of the Intestines," he states "that his chemical and experimental experience had led him to believe that a very large number of cases of colic, enteralgia, and enteritis, and cases which are clinically indistinguishable from typhlitis, are neither more nor less than a gout of the walls of the intestinal tube, or a rheumatism, as has just been defined." In Canada, as a whole, gout is almost an *unknown quantity*, except in occasional cases of an hereditary type. Our people, in the midst of life's pursuits, live in a moderate way, which contributes greatly to the promotion of health. On the other hand, rheumatism is of frequent occurrence. The coldness of our winter climate, the occasional absence of flannel, and excessive exposure contribute to develop rheumatism.

After noting the life history of many thousands of our lumbermen, I have been amazed at the few attacked by rheumatism. Bread, pork and strong tea constitute their chief articles of diet, and the general experience is that the tea enables them to digest the pork with remarkable comfort, and certainly after a hard winter's work they return home well-nourished and healthy in every particular. These facts point to the importance of simplicity as to diet. Our progenitors frequently attained the age of "three-score and ten," nourished by grain ground between two stones. As a rule, the present generation *live too fast*, resulting in mental strain and the absence of simplicity. With greater attention to diet, simple in its character, in conformity with the normal functions of the alimentary canal, and the avoidance of alcoholic beverages, as a whole, I feel confident perityphlitic and appendix troubles, even unconnected with gout and rheumatism, would become less troublesome factors in the line of disease.

To avert various irregularities in the alimentary canal, which if neglected, would undoubtedly lead to trouble in time, is as important as subsequent treatment, when the stage is passed in which the efforts of nature are powerless to afford relief. What active agent in the system is more frequently tampered with than gastric juice, which requires a normal temperature to perform its part in the economy. Ice water at the commencement, and ice cream at the end of a meal may be fashionable, but certainly not life preserving. Unassimilated food makes its way to parts not designed by nature to transform and absorb; as the result, how frequently on percussion we find extensive portions of *bowel ballooned* by abnormal efforts to accomplish the digestive process. Such conditions result from irregularities in living. No portion of the alimentary canal is more liable to diseased manifestations than in and about the appendix, which is a species of loop-line to the digestive tract.

Insurance associations can not note too carefully the probabilities of life in this connection. There is still much to be accomplished, and let our medical education be so directed as to bring about simplicity in living, as near as possible, to the normal functions of our organs, and our generation will be greatly benefited.

RIPENING OF IMMATURE CATARACTS BY DIRECT TRITURATION.

Read in the Section on Ophthalmology, at the Forty-fourth Annual Meeting of the American Medical Association.

BY BOERNE BETTMAN, M.D.
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Six years have elapsed since I first called the attention of the profession to my operation for ripening immature cataract. During this time I have had excellent opportunities to study the indications for this procedure and to note its immediate and later effects. I have made known my observations in three papers, and my main object in presenting another to-day is to call attention to a few more features and to elicit a discussion from a representative body of specialists.

The most important question, the raison d'être of the operation will first occupy our attention. Is the operation justifiable? Knapp in his paper on cataracts read before this section last year says: "Preliminary ripening operations are, in my opinion, almost always superfluous. I prefer the risk of extracting an unripe cataract to that of any ripening method with which I have become acquainted. The leaving of remnants behind has, in the manner in which I operate, very little to signify. Locked up in the capsule they produce no iritis, and can easily and successfully be dealt with by the secondary division of the capsule.

"I avoid operating on cataracts swollen by inbibition. They render the section difficult and rarely come out cleanly, whereas the immature cataracts, known under the name of nuclear sclerosis, if the anterior chamber is deep mostly, not always, come out entire."

Hirschberg denounces all procedures for maturing lenses in even stronger terms. In a review of his paper, "Ueber Kernstar Ausziehung," he says: "I operate on all senile, nuclear cataracts past the age of fifty, as soon as the vision is decidedly diminished (erheblich beschränkt), that is to say, as soon as the

patient finds no pleasure in living, and is no longer able to gain a livelihood by his vocation." Further on, he speaks of all operations for artificial ripening of the nuclear senile cataract past the age of fifty, as appearing to him not only dispensable (entberlich) but rather as unnecessary (unzweckmässig).

It seems to me that the opinion of these two eminent authorities voice the sentiments of opponents to artificial ripening the world over, and therefore I allude to these only.

Evidently, Dr. Knapp regards preliminary ripening as risky. I agree with him that Förster's entails the danger of setting up an iritis which, although not of a serious nature, naturally may affect owing to the posterior synechia, more or less the execution of the subsequent extraction of the lens.

That my method is absolutely safe when properly performed, has been proved by the absence of any complication attributable to the procedure. In the twenty cases thus far reported, and the three to be mentioned later on, good results were obtained after delivering the cataracts. The only danger Dr. Knapp refers to is iritis. This is obviously excluded when the iris is not mutilated or even bruised in the slightest degree.

I have long ago abandoned iridectomy, and with the introduction of my trowel shaped spatula have secured the iris against all danger of mechanical injury. Possibly the Doctor had also in mind, mishaps to the lens and suspensory ligament, although he makes no mention of these in his article. Others have, however, expressed themselves in this manner in personal discussion with me. As a rejoinder I can only point to my results, and again refer to the convincing argument employed in a former publication which reads as follows: "As for the second series of objections, I can only reiterate that careful and skillful manipulation of the spatula in my hands has never been followed by any untoward symptoms; seemingly the most probable misadventure would be tearing of the suspensory ligament, and dislocation of the lens. In two cases only, vitreous escaped due, however, to other causes."

I heartily agree with Dr. Knapp in ascribing the injurious effects to remnants of cortex left behind after cataract extraction, and have consequently, until lately, performed peripheric capsulotomy in every case.

Direct trituration of the lens breaks down and makes opaque the entire lens volume. Later on, when extracted, it ordinarily leaves in bulk, or if the softer cortical substance is scraped off by the corneal flaps this can be pressed out immediately after, en masse. Consequently this danger is reduced to a minimum, and induced me in the last case to lacerate the capsule more extensively; in other words to make a T-shaped capsulotomy.

In reference to Dr. Hirschberg's remarks, I must emphasize the fact that direct trituration of the lens was not intended for the so-called sclerosed cataracts. We all know that such cataracts never become thoroughly opaque, and that they can be readily removed as soon as they interfere materially with the patient's welfare. But not all patients past the age of fifty have sclerosed lenses. Furthermore, a great number are afflicted before they reach that age. An opacity of the nucleus with a few broad striæ in the periphery may disable a person, or at least make life a burden and prevent him from following his vocation.

Extractions of unripe softer forms of nuclear cataract, where fingers are still counted at ten and fifteen feet I regard as hazardous, especially so when we possess a reliable and innocuous method, by which the transparent lens fibers can readily be broken down and their connection with the capsule loosened.

Again, the patient may possess but one eye; reduction of vision equal to one-half places him within the boundaries outlined by Prof. Hirschberg. Would the extraction of such a cataract be advisable? I have vainly endeavored to learn the exact amount of opacity of the lens which must exist before extraction of the lens is considered feasible by the adherents of early extraction. In other words, at what stage of immaturity do skillful men dare to operate?

Again, let it be understood that sclerosed lenses, such with fine striæ, or with none at all, and with a firm nucleus often of an amber color are not to be considered in this connection. Cases with incomplete opacity of the anterior cortex, permitting fingers to be counted at three, five and six feet, can no doubt be safely removed in this condition of immaturity. But I am in doubt whether the operation would be undertaken, when the lens is so unripe that not only a reflex but even a view of part of the fundus is visible. Two of the cases reported later on were of this nature.

I have made a number of experiments on rabbits, to determine in the first place the amount of pressure the lens will bear without rupturing capsule and ligament. I also intended to study with the ophthalmoscope and later on with the microscope, the changes thus evoked in the lens. My rabbit house was lately burglarized by street urchins and every bunny, nine in all, was carried off. Two others succumbed to injuries caused by a blow on the back and one more escaped. My investigations have, for the present at least, been brought to an untimely end.

A few facts have been gleaned which may prove interesting: nine of the animals were young, perhaps five or six weeks old, three had reached the age of one year and were almost fully grown. In ten eyes I introduced the spatula, after having chloroformed the animals, and made a corneal incision with a lance and subjected the lens to violent trituration. The pressure I exerted was quite uniform, but rather severe, far more so than I would dare attempt in the human eye. In some cases I wounded the iris with a knife, in others a prolapsus of the iris followed which I did not attempt to reduce. The eyes were cleansed with a bichlorid solution and no farther attention bestowed on them. In nearly all, a decided opacity of the posterior cortex was visible the next day. In a few it extended to the body of the lens and then to the anterior cortex a day or two later. In the majority of cases the bulk of the lens cleared up within ten days. In two, not a trace of any abnormal condition could be seen and in the remainder more or less striæ were still visible weeks after direct trituration. Secondary reaction ensued in a few, in those having prolapsed irides, but disappeared in a few days. These incomplete experiments indicate that normal lenses of young rabbits will stand very severe trituration without rupturing the capsule or suspensory ligament. They also indicate that changes (directly attributable to the massage) of a more or less permanent nature will appear in the normal lens.

If similar experiments, with similar results, were undertaken on old rabbits showing senile changes, we could then draw more conclusive deductions regarding the immunity from danger of the senile capsule and suspensory ligament following massage of the lens.

The cases I will now report were nuclear cataracts with broad striæ in the anterior cortex. Two were senile, the other, that of a young man, cortical with a very small nucleus. In all, a marked reflex from the fundus was obtainable; in the young man, a dim view of the lower part of the fundus could be seen. None of these cataracts were ready for extraction, and I have grave doubts whether the gentlemen who advocate the removal of immature lenses would have considered them sufficiently advanced.

Case 1.—Theo. T., aged 68; admitted into the Eye and Ear Infirmary, Oct. 24, 1892. Senile cataract both eyes. R. E., mature three years. History of amblyopia. Simple extraction, October 27. November 17. Secondary capsulotomy V=20-200 with + 10. An ophthalmoscopic examination revealed choroidal changes. L. E., immature cataract of six months duration. Could see enough to walk about the streets but not sufficiently to perform work on farm. A dim reflex from fundus was obtainable. My fingers were readily counted at eight feet. It was only after long persuasion that he allowed me to triturate the lens December 1. He left the infirmary December 6, with instructions to return as soon as sight failed entirely in that eye. He returned December 21, stating that for the week past he had not been able to count fingers. The entire lens was opaque. No iris shadow was seen. He was only able to indicate the direction of the moving hand.

I did a simple extraction the following day, December 22, and a secondary capsulotomy Jan. 11, 1893, which resulted in V=20-40 with + 10. Slight choroidal changes were found in this eye also.

Case 2.—Alex. F., aged 50; admitted Feb. 19, 1893. Immature cataract of both eyes. R. E., V=20-200. L. E., nuclear cataract. Broad striæ in upper and outer part of cortex; lower and inner parts much clearer, permitting a dim view of fundus. V= fingers at six feet. I did direct trituration Feb. 9, 1893. The lens soon became opaque March 7, the cataract being entirely mature and vision reduced to qualitative perception of light. I did a simple extraction and later on March 16, needled. He was discharged a few days later with V=20-20 with + 11 D ⌒ + 1 dcy axis 180°.

Case 3.—Martin DeYoung, aged 34; admitted Jan. 3, 1893. L. E., mature soft cataract, white small nucleus plainly outlined; had not been able to see during past four years. R. E., immature, small opaque nucleus. Broad striæ running from equator toward center leaving clear space between, through which blood vessels in the fundus could be distinctly outlined. Simple extraction was done on the left eye January 15. Secondary capsulotomy January 26. V= 20-20 with + 12 D. The left lens was triturated March 25. The condition of the cataract was as indicated above. Fingers were counted at five feet. A few days later the entire anterior cortex had assumed a fine satin-like appearance distinctly visible by oblique illumination. A month later the entire cortex had assumed almost a uniform white appearance, allowing the small, yellowish white nucleus to shine through. April 25, I performed a simple extraction. The corneal incision was made throughout in the cornea. The capsule lacerated in several directions. The small thin nucleus was expelled with a mass of opaque cortex clinging to it; the remainder of the soft, cohesive cortical substance was readily pressed out with the spoon leaving a clear black pupil. The eye made a rapid recovery with a slight anterior synechia at the inner edge of the wound. The patient was discharged soon after with V=20-30 with + 12 D. I saw him a week ago; a few shreds of torn capsule surrounded the clear pupil. His vision was the same.

In conclusion, I will formulate the result of my six years experience:

1. Artificial ripening of cataracts is in properly selected cases demanded; 2, direct trituration is preferable to other methods; it is easily performed by one possessing ordinary skill; 3, it is not followed by any untoward symptoms, consequently it is a safe and reliable procedure; 4, it is not indicated where sclerosis involves the bulk of the lens; 5, it is especially useful in senile cataracts with soft cortex; 6, the results of the massage are marked and rapid; 7, maturity of the cataract is usually induced in three weeks, often sooner; 8, very little discomfort is caused the patient aside from bandaging the eye two days; 9, at the subsequent extraction of the lens, the cortical substance is readily removed and dangers of iritis and suppuration of the corneal wounds are lessened.

DR. KNAPP—I have had only a very limited experience in ripening cataracts, but Dr. Born, my associate at the New York Ophthalmic and Aural Institute, had ripened a certain number of cataracts according to the very method of Bettman and the results had always been good. Nevertheless Dr. Born has given up the ripening operation as being dispensable in almost all cases.

DR. J. L. THOMPSON—Do you use a mydriatic before making the operation of ripening?

DR. BETTMAN—I usually use cocain.

DR. ZEIGLER—I have performed direct massage of the lens for artificial ripening for cataract in two cases that I recall, and with excellent results. There was no reaction. The eyes healed in three or four days. The cataract matured in about two weeks. One was extracted safely at the end of six weeks, and the other in six months. The method I followed, however, was that known as Förster's, in which I did a preliminary iridectomy, although I introduced the shell spatula through the incision into the anterior chamber, and made gentle massage of the lens by direct pressure on the anterior capsule of the lens. This procedure is particularly applicable in those cases of slowly forming cataracts, where the vision of both eyes has become sufficiently hazy to interfere with the patient's usual occupation.

DR. JACKSON—Since the last meeting of the Association, I have resorted to the operation then described by Dr. White for preliminary ripening in seven cases, six of which I have since extracted without any trouble and with good results. Five of the patients were over fifty years old; the results were practically the same. Immediately after the operation there was slight haziness of the anterior surface of the lens, which passed away in a few hours, and at the end of forty-eight hours no change in the opacity. Within three to five days there was perceptible increase in opacity, and in from one to three weeks complete opacity. The extractions were made at different times, from three weeks to six months after the ripening. The reaction after the operation was very slight, little, if any more, than would be due to the tapping of the cornea alone. The after treatment was simply the use of a mydriatic and keeping the lids closed for a few hours until the chamber was refilled. The operation is certainly satisfactory in producing the result aimed at. Yet I think that the chances are almost as good for extracting the lens without having produced this complete opacity. If the opacity were great enough to make the extraction necessary, I think there is no condition of the lens where I would hesitate to do extraction, without any preliminary operation whatever.

DR. MURRELL—How long do you triturate the lens, and about how much pressure do you use?

DR. BETTMAN—I have explained the method several times and that is why I did not refer to it in my paper. I simply make an incision in the cornea with a keratome, then pass the proper instrument into the aqueous chamber and make light pressure on the lens, rubbing it up and down, and from side to side for a short time only. From six to twelve passes with the spatula will answer.

Lack of time will prevent me from making any extended remarks. I must take the next train for Chicago. The great objection to Förster's operation lies in the fact that not only the lens but the cornea and iris also are subjected to mechanical irritation, which is apt to produce cloudiness of the cornea and iritis. A further drawback is that the pupillary and coloboma areas become small after evacuation of the aqueous humor, consequently but a small surface of the lens is triturated. The same objections hold good in White's operation; in fact a smaller surface of the lens is exposed, no iridectomy being made. It is in my mind inferior to Förster's. Dr. Jackson is mistaken if he thinks the posterior surface of the lens is not affected by trituration. In the first place it is known that the posterior cortex is much thinner than the anterior; furthermore, my experiments on rabbits have proven that the posterior cortex breaks down and becomes opaque sooner than the anterior.

REPORT OF A CASE OF EXTRACTION OF CATARACT IN A NEGRO SAID TO BE 116 YEARS OLD.

Read in the Section on Ophthalmology, at the Forty-fourth Annual Meeting of the American Medical Association.

BY FRANK TRESTER SMITH, AND B. F. TRAVIS.
CHATTANOOGA, TENN.

Easter McCullough, residing at 611 Cowart Street, Chattanooga, a very aged negro woman, was seen in the summer of 1892, with the usual history of cataracts in both eyes, both fully matured. On functional examination the eyes seemed normal, save that the right pupil appeared a little irregular. Her children were not willing that she should be operated on, believing that an operation would be the death of the old woman on account of her age. In March, 1893, they concluded to have an attempt made to remove the cataracts. The left eye was first operated on by Dr. Smith who, after making an upward incision performed a small iridectomy and a linear cystotomy. The cataract was then pressed out and the speculum removed. After seeing that the eye was clean, a flannel bandage was applied. The operation was without accident. The incision was a little small but not enlarged. Anesthesia with cocain. Healing was slow. The weather was damp and cold much of the time and the patient was bothered with rheumatic aches and pains and repeated colds.

The result (with +11 D. lens) finally showed a vision of 20-70, with a prospect of improvement from a secondary operation. This result may be considered as very good, from the mental condition of the subject.

A short time ago Dr. Travis operated on the right eye, but the case is not yet far enough advanced to declare the result.

As the only point of interest in the case centers on the age of the patient this question was investigated carefully. The family insisted that she was 116 years old. From the evidence of Dr. T. Y. Park of St. Elmo, to whose wife's aunt Easter formerly belonged, the conclusion was reached that she was about ninety-five. The years do not always represent the age from a physiological standpoint. Some men at fifty are more aged than others at sixty. The woman was as aged as any one we have ever met. The lesson in the case, which we do not presume to be new to the members of this section, is that old age is no contra indication to the operation for cataract.

The operation has had a marked effect on the patient in another way, in that she has seemed to take a renewed interest in life. She is in much better spirits, and bids fair to disappoint those who thought she had but a few months to live, and that it was useless to bother about such a little thing as the eyesight.

SYMMETRICAL DISLOCATION OF BOTH LENSES UPWARD AND OUTWARD. CONGENITAL.

Read in the Section on Ophthalmology, at the Forty-fourth Annual Meeting of the American Medical Association.

BY LEWIS H. TAYLOR, M.D.
WILKESBARRE, PA.

Mr. Chairman:—I desire to present a short account of a case of lens dislocation, because of the unusual position of the lenses, and because of certain interesting statements by the mother of the patient as to the possible cause of the difficulty:

James McC., age 20, came to me Dec. 16, 1892, to see if anything could be done for his eyes which had been bad since infancy. V., O. D. 3-200; O.S, 1-200. His mother states that he has always had very poor vision and she thinks that this condition has existed from birth. He had rheumatism when 8 years old and has had heart trouble ever since. He now has marked valvular trouble with hypertrophy. The patient has a very peculiar, elongated face, with flattened nose.

The ophthalmoscope shows both lenses symmetrically dislocated, upward and outward, about one-third of the diameter of each being visible beyond the pupillary margin. Lenses partially opaque. He selects O. D. +11-100 + 1.50 cy. axes 90, making vision 20-70. O. S. very uncertain and vision not improved with any glass. Inasmuch as glasses improved his vision so much above his former condition, no operation was advised. I have recently seen him and find vision O. D. 20-50, with his correcting glass, which he wears constantly and with comfort.

His mother states that during pregnancy and one week before the birth of this son, she accidentally fell forward, striking heavily upon her abdomen. This caused considerable pain, but she does not think that it hastened confinement as she was then very near full term. The interesting question to consider, is the bearing of this accident upon the dislocation of the lenses in utero. Inasmuch as the trouble has existed since birth, it is quite likely that the fall may have had something to do with the displacement of the lenses, though I am not aware that such an accident has been elsewhere suggested as a possible cause of ectopia lentis. The mother is quite confident that this was the cause of the patient's defect. Are we sure that the present case is congenital? Not absolutely, but in the absence of any history of traumatism since birth, and in view of the statement made by his mother and himself that his sight has always been poor, we are safe in assuming that the trouble was congenital.

In two cases presented on the same day in Prof. Jaeger's clinic, the notes of which were kindly given me by Dr. Randall, Prof. Jaeger held that the first was congenital, because both lenses were displaced inward and upward. No. 2, however, was regarded as probably traumatic, because both lenses were displaced upward and to the left, i.e., one outward and one inward.

Dr. W. S. Little, in Transactions of the American Ophthalmological Society for 1883, reports two cases of supposed congenital ectopia lentis; the first being non-symmetrical, the displacement being upward, but with both lenses to the left. In the second case.

the displacement was symmetrical, both being downward and inward. In all of the traumatic cases that I have seen, the displacement has been downward, and this I believe is usually the case, though of course it may be in any direction.

DR. J. L. THOMPSON—Were the lenses movable, and were they all turned upward?

DR. TAYLOR—The lenses were fixed, and were turned upward and outward.

DR. KNAPP—I had a very interesting case of outward dislocation of both lenses. When I saw the patient he was 30 years old. His mother had the same trouble, also a nephew and two nieces. He had tetropia quadruple vision, i.e., double vision in each eye and he squinted. One image was formed in each eye, by the light passing through the cornea and lens, and the other by the light passing through the cornea alone. In each eye he thus had, simultaneously, myopia one-fourth and hypermetropia one-fourth. By giving him either a concave or convex glass of one-fourth, the one image was made sharp while the other became so blurred that it disturbed him but little. In this way his tetrophoria was reduced to diplopia, and this by a squint operation to single vision. It was one of the most singular cases I have ever seen. I mentioned it in some publication but have forgotten where.

DR. TAYLOR—In this case the lenses were so far drawn to one side that the patient has accustomed himself to look through the pupillary space, not occupied by lens, as if he had been operated on for cataract. I saw the father of this family and found he was highly hypermetropic, but with no dislocation of the lenses.

THE PERNICIOUS INFLUENCE OF ALBINISM UPON THE EYE.

Read in the Section on Ophthalmology at the Forty-fourth Annual Meeting of the American Medical Association.

BY GEORGE M. GOULD, A.M., M.D.
OPHTHALMOLOGIST TO THE PHILADELPHIA HOSPITAL.

I have had the good fortune to examine and treat the eyes of two families of albinos, and the results of my studies have led me to some conclusions that I trust may be of interest and value to the profession, and may ultimately be of benefit to these most unfortunate beings.

I shall first describe my cases: the first family is composed of rugged, healthy, normal parents, of American descent and birth, the father a strong and robust farmer, the mother an equally well-developed woman, who has borne seven children, all living and healthy, now ranging from the ages of four to twenty-two. The most diligent inquiry has failed to elicit a single instance of albinism, or of pathologic taint in the ancestry of either parent; there has been no intermarriage of cousins, and nothing to lead one to suspect syphilis, intermixture of negro blood, other dyscrasia or disease-abnormality, to which albinism has heretofore been blunderingly ascribed.

Parents and children are all honest, hardworking, simple countryfolk, and all are remarkable for a sturdy development, a largeness and healthfulness of body, and a freedom almost remarkable from any illness during the life of each. The parents show no trace of albinism, no abnormalism of skin, hair or eyes. Their refraction, barring beginning presbyopia, is as near emmetropic as we can find, with no hyperopic astigmatism at axis 90 degrees.

Case 1.—The oldest child, W. T., a lusty fellow of 22, about six feet tall, big-boned and of rugged health, presents the typical characteristics of albinism. As to the eyes, he has great photophobia, a rapid horizontal nystagmus, and an amblyopia of 20-100 each eye, and a simple hyperopic astigmatism of 5 D., (right eye) 4 D. (left eye), axes 90°. There is possibly some divergent strabismus of the right eye.

Case 2.—The second child, L. T., a girl of 20, albino, with nystagmus and photophobia, rivals her brothers in physical vigor and development. The refraction is: R + sph. 5.00 D. ⊃ + cyl. 2.50 D. axis 100° = 20-100. L. + sph. 2.50 D., ⊃ + cyl. 2.50 D., axis 90° = 20-100.

Case 3.—The third child, L. T., a big man of 18, shows no sign of albinism, and has a low degree of hyperopia, with no astigmatism or other ocular abnormality, structural or functional.

Case 4.—The fourth child, E. T., a girl of 15, a pure albino, with great photophobia and swift nystagmus, has the following error of refraction: R.—sph. 2.50 D., ⊃ + cyl. 1.50 D., axis 90° = 20-100. L. — sph. 2.00 D. ⊃ + cyl. 1.50 D., axis 90° = 20-100.

Case 5.—The fifth child E. T., aged 11, a pure albino, of less robust physical vigor than the rest, has a simple hyperopic astigmatism of about seven dioptres at vertical axes, and a visual acuity of about 10-200 or 20-200, with swift nystagmus and photophobia.

Case 6.—The sixth, L. T., a girl of 8, not albinotic, has an inconsiderable hyperopia and a very slight astigmatism.

Case 7.—R. T., the seventh child, a boy of 5, is not an albino, though there is faulty opacity of the iris, with some slight nystagmus and a hyperopia of perhaps two or three dioptres.

In the second family I have examined, the non-albinotic parents are of as good stock, and of as perfect healthiness, both general and ocular, as the first family. There have been but three children born, all good specimens of physical vigor:

Case 8.—The oldest child, a boy of 12, is a pure albino, with 2 D. of hyperopic astigmatism (axes 100°, and 80°) on top of 5 D. of hyperopia, 20-200 vision, nystagmus and photophobia, with moderate convergent strabismus of the right eye.

Case 9.—The second child, 10 years of age, is not albinotic, and except a little hyperopia, presents no ocular abnormality.

Case 10.—The little girl, aged 4, is not quite the purest type of albinism, has moderate and slow nystagmus, and as near as ascertainable, a compound hyperopic astigmatism of 2 or 3 D.

Heredity, so powerful in all other factors, physiological or morphological seems, at least in the human race, to play no part in the production of albinism. In the literature I have examined this seems very evident. Darwin speaks of a family of albino children whose parents were first cousins, but this was certainly accidental, and can not be accounted as causal. In animals there are a number of species of albinos, in which the hereditary element is indubitable. The noteworthy fact concerning my two families is that albinism appears without any discoverable cause, and writers generally agree that this is usually so. Not only does the affliction strike a family like lightning out of a clear sky, but, as in both my families, there is an unaccountable alternation of albinotic and of naturally pigmented brother or sister. It is evident that here is an inviting field for investigation and even of experiment.

Physical and Mental Vigor.—The old notion that albinism is due to some general pathological element or dyscrasia, is likewise false. From other reported cases and from my observation, the exact reverse seems to be the truth. In animals and men, albinism is apparently bound up with exceptional health and robustness. The idea also that it coëxists with cerebral or mental deficiency or disease is just as untrue. This statement, however, requires an important modification. Biologically, vision is the very

condition of mental development and existence, and with the necessary limitations the law holds as to the individual. Nothing more certainly and more thoroughly affects the mind than ocular disease or the deprivation of vision, and the highly abnormal vision of the albino is most profoundly active to hinder and abnormalize the mind, thus denied its most important means of knowledge of the external world. In this connection, however, the all-important point is the method or manner in which ocular disease produces mental abnormalism.

The Family Study, gives the best field of suggestive observation because, from the babe to the adult, the progress of the morbid changes can be traced and a logical idea is thus gained of the influences and laws at work. Many brothers and sisters may in this way be correctly focused, as it were, into one beam of light, or considered as phases or aspects of one personality and one law, the masse and unitized results standing out in more perfect relief.

Since the present writing is to be rated mostly as a suggestion to others of a fertile field and method of examination, I shall briefly state what I tentatively hold to be the law of the causes and of the effects in these cases, in order to solicit from others corroborative or contradictory facts whereby a neglected class of medical cases may be understood, and possibly much suffering forefended. I say much suffering, because if one may hazard a guess it would be that there are thousands of albinos in the United States, and for this frightful affliction I can not learn that ophthalmological science has either sought to learn the pathology of albinotic diseases, nor has ophthalmological art turned a finger towards their prophylaxis and therapeutics.

The Cause of Albinism, in the present condition of our knowledge, is entirely undiscoverable. The failure of the epiblast to secrete the usual pigment cells is a mystery of molecular physiology that the future must solve.

The Pathological Significance of Albinism lies, I believe, solely in the fact that the iris or diaphragm of the ocular camera is transparent, or so nearly so that it does not act as a true photographic or physiological diaphragm. The white hair and skin that so vexatiously attract the attention, have for the physician and for the patient absolutely no medical significance, except as regards the transparency of the lids. The skin and hair are in every way as healthy as other hair and skin normally pigmented, and serve every function quite as well. But I would also advance the theory that the absent pigmentation of the choroid has also little pathological significance, except as permitting trans-scleral illumination. In many blondes the retinal or choroidal pigment is almost or quite as fully absent as in albinos, but the iris being properly pigmented, there is no ocular disease. From non-opacity or non-pigmentation of the iris follows the entire train of evil results that afflict the albino, and from this slight cause alone. What are the evils?

Photophobia is the most evident and inevitable consequence of a transparent iris.[1] If one has endured the misery of mydriasis during a sunny day, and without the protection of colored glasses, he will have a vivid knowledge of the retinal torture that the albino must always endure. With prolonged habits of eyelid and face protection, and with the wise adaptations and compensations that living tissues somehow learn, albinos, or some of them at least, develop a partial and suffering indifference to light, but most of them present the constantly painful picture of bowed heads, downcast eyes, wrinkled brows and lids, a vain endeavor to shut out the ill-defined and overpowering light rays pouring into the retina from all sides, and which not even the lids and sclerotic can exclude as our normally-colored lids and scleras do.

Nystagmus.—The existence of Miner's nystagmus, concerning which there has of late been much discussion, has served to show that these oscillatory motions of the ball are not primarily due to central disease. It is evident that the exciting cause is the occupation and the effort of healthy cerebral centers to compensate for and overcome the peculiar and abnormal ocular labor. We have somehow grown up with the idea, unconsciously accepted, that nystagmus is always a disease, and that it starts in abnormal function of the motor centers for innervation of the external ocular muscles. But in albinos the brain is strong and healthy; it is only the eye that is abnormal. The source of the nystagmus is, I firmly believe, in these cases not central, but is peripheral, and primarily it is only a physiological attempt of the ocular mechanism to find a less faulty and blurred image of an object. Every ophthalmic surgeon has time and again seen nystagmus in the making. Children and others with corneal ulcers, or extensive maculæ of the corneæ, in searching for the diffused and faulty retinal image are constantly sweeping the eyeballs about and from side to side, in the desperate and never-to-be-renounced endeavor to locate the hazy and non-limited images. Coöperating with this cause is probably the attempt, constantly renewed, to throw the poor image that is formed, upon a less illuminated portion of the retina than the macula-region, in order thereby to secure a better contrast or definition. Snow-blindness and moon-blindness, as well as our daily experiences, show us that with continuance of stimulus the retina tires. Continuous exposure of the retina to light exhausts the molecular agencies, the delicate anabollism, and wears out sensitiveness. In the general illumination of the fundus of the albinotic eye, there is then a diminished excitability and a fierce war against the constant and powerful stimulus. Nystagmus is simply the attempt to give one part of the over-stimulated retina a rest of a fraction of a second, to give it time to build up its katabolism again, to locate the image upon other percipient elements that have had that rest and whose anabolisms therefore are not quite so exhausted or depleted. The peripheral portions of the retina are more shaded and the attempt is made to throw the image on these portions. The retina can never renounce the Sisyphean task of hunting for a more sensitive and darkened portion of its surface, and for a picture with a better definition. In this sense and at first, the nystagmic motions are simple physiological endeavors

[1] In the autobiography of the late Lord Sherbrook of England, who was an albino, we have an account by a great man of his sufferings from this defect. "The peculiarity of my eyes consists in the total absence of coloring matter; this occasions, of course, especially in a man, a very marked peculiarity of complexion, amounting in youth to something of effeminacy. For this evil, however, I have found age a sovereign cure; but as the absence of coloring matter extends to the eye, it necessarily occasions a great impatience of light. The eyelids must always be nearly closed, and so I have never been able to enjoy the luxury of staring any one full in the face. Of course this intolerance of light must be attended with something very closely approaching to pain. I can not even conceive the state of a person to whom sight is a function free from all pain and distress; but as I have no standard to measure by, I may exaggerate my own misfortune."

to locate an almost non-localized picture, and to definitize a suggested and ever borderless image. I take it that Miner's nystagmus is due to the forced repetition, a million times a day, to locate a fluctuating, dim and ever-disturbed retinal image. In albinos, the lens and dioptric media give the persistent hint rather than the sharp reality of a retinal picture, which the iris transmission of the peripheral light as certainly spoils, washing out its outlines and bathing the whole fundus-oculi with ill-defined images and confusing brilliancy. Thus, like blind men's fingers that grope after hoped for support and defense, the eyeball is kept constantly fluttering between hope and renunciation, in its ceaseless necessity of search for what can never be found. When abnormal function passes over into organized habit and pathologic tissue change, just when physiology becomes pathology, just at what time of life the proper image-definition, if it were possible to supply it, would stop the nystagmus, must be decided by future discovery and experiment. But I believe there is little room for doubt that the cause of the nystagmus is the definitionless image and diffused illumination of the fundus, caused by the transparency or translucency of the iris. This may be more than suggested by the removal of the iris in a pig's eye, and seeing the effect on the fundus image, or by diaphragmatic experiments with a camera obscura, or with the artificial eye of Perrin or Frost. The theory is about proved by the observation that in a family the nystagmic movements are slowest in the younger, and in the less albinotic irides, and are rapid in proportion to the increase of age, and of albinotic and ametropic defect. The clinical proof of therapeutics yet fails from the too evident present difficulty or impossibility of making an artificial iris, or of definitizing and delimiting the retinal image. But I have not yet despaired of this.

Ametropia.—It is commonly said in the copied, rote repetitions of the books, that the albinotic eye is a diseased eye, the lens malformed, and everything wrong about it. It is my belief, as I have stated, that primarily there is nothing wrong with the albinotic eye except simple want of iris-pigment, and that all its other evils flow from this as a sole cause. All the albinotic eyes that I have seen are beautiful and perfect structures, except as regards this pigmentation. The scrutiny of my cases and the comparison of each member of the family group with the whole, and with my theory as a key, goes far to prove my contention. Doing this, it is observed that the more transparent the iris and the older the patient the greater, other things being equal, the ametropic defect. And this is very readily explained by the influence upon the eyeball of the persistent lid pressure and blepharospasm, the cheek and forehead muscles also coöperating, together with the powerful retracting forces of the external globe muscles. The brilliancy of diffused fundus illumination is thus only partially lessened, but the attempt must always be kept up, even though the folded and wrinkled skin by its translucency can not wholly effect the desired exclusion of light. Age also has its influence, as the longer the lid pressure has been kept up, the greater is the ametropia, and especially the hyperopic variety of astigmatism. It is the axis of this astigmatism that also helps to reveal the nature of its cause. The influence of the spasm and crushing of the lids is seen only by noting that no ametropia exists in the parents; none, or comparatively none, in the non-albinotic children; more hyperopia, or rarely myopia, in the younger albinos, either of the less pure type or of relatively less physical stamina; while we have enormous degrees of hyperopic astigmatism about axis 90 degrees in the older and stronger. The lids have crushed the eyeball so continuously that we have extreme corneal asymmetry at axis 90 degrees.[2]

Amblyopia need not detain us long to explain. It is also secondary. The unphysiological image stimulus, and the nystagmus would in time necessarily bring about lessened visual acuity, even if it were not directly and at once the result of the diffused illumination of the whole retina, and especially of the macula-region. Continued over stimulus and abnormal stimulus everywhere destroys physiological reaction and blunts the delicacy of sensibility.

The combination, photophobia, nystagmus, ametropia (often also insufficiency or strabismus), and amblyopia, presents a union of four frightful ocular defects that leaves little to add of worse. It is interesting to distinguish how each is causally bound up with the other, and that there is thus formed a vicious circle of disease that tends to enlarge and increase in virulence so long as the tissue changes of the growing period of life render the ingravescence possible. But I wish to emphasize again my conviction that, each and several, these four things are directly or indirectly due to the one etiological factor, a non-pigmented iris. A non-pigmented choroid and lid exaggerate the evil.

Prophylaxis and Treatment.—If this be the true etiology, what will be the logical attempt at therapeutics? It is evident that, as all true cure aims at extinguishing the cause of the disease, so here the one hope of individual prophylaxis and cure must lie in supplying either a pigmented iris, or an artificial substitute for the same.

As all abnormalism of so constantly reappearing a kind as general albinism of the body must have a definite cause, we are compelled in default of present knowledge of that cause, to wait further scientific discovery before the prophylaxis or cure of this developmental epiblastic peculiarity is possible. In the meantime, the reported changes in individuals of pigmentation, both away from and toward albinism, give us hope that the law may be discovered, and that even a general cure is entirely possible and yet to be discovered by some brilliant investigator. There are seemingly trustworthy reports of several albinos in whom with years there was an increased pigmentation of the hair, skin, and notably of the irides.[3]

The old suggestion of tattooing the cornea has two decided objections: 1, the danger from the operation, performed on an otherwise healthy and normal eye. In a densely leucomatous eye there is nothing to lose, but were I an albinotic patient I would hesitate to permit the tattooing of my cornea; 2, the transparent sclerotic and lid will also transmit so much light as to prevent absolute perfection of result, even though the imitation tattoo-iris were successful.

In this connection, my friend, Dr. Wendell Reber

[2] This causal agency is shown in the quick changes to be noted according to my friend Dr. de Schweinitz, in the amount of astigmatism as observed by the ophthalmometer when the lid is drawn away from the globe, or when the patient partially closes and retracts the lids. Note also the power of a meibomian cyst to change temporarily the axis of astigmatism. (cf. Gould, Medical News, June 3, 1893.)

[3] Joseph Jones, M.D., on Fevers, p. 1163.

of Norristown, Pa., in conversation with me suggested tattooing of the palpebral conjunctiva,—a plan that would certainly aid in shutting out the light that the non-pigmented skin of the lid transmits. This might give the darkened lid a peculiar appearance, and render the sensitive patient more uncomfortable than ever, suffering, as he does, enough from his conspicuousness. If corneal tattooing were successful this would certainly aid in giving relief.

A more probably successful plan may be one with which I am now experimenting: the wearing of London smoke coquilles that will cover the eyeball, and that permit enough light to pass to enable the patient to catch glimpses of objects with the peripheral portions of the retinæ. This is for purposes of safety and comfort to the patient in detecting objects not directly in front. In these coquilles I first ordered a round segment, one-sixth of an inch in diameter, exsected, directly in the line of the visual axes, and into the openings I inserted transparent lenses with the patient's ametropic correction. My hope was that by this plan the peripheral portions of the retina will be shaded, the image fixed accurately at the macula, and the nystagmus prevented, with the necessarily resultant cure of the amblyopia. These spectacles were given Case 5. Within thirty seconds after their application, the girl became deathly pale, was seized with violent nausea, and would probably have swooned if the glasses had not been removed. I explain this as perhaps caused by the too sudden cessation of the nystagmus, the violent checking of an habitual, powerful and rapid innervation, with consequent overflow of the innervation to other ganglionic centers and derangement of other related functions. The experience was so frightful that the patient could not be induced to repeat it. I then had another pair of lenses made similar to the first, but with the transparent lenses correcting the ametropia, five-eighths of an inch in diameter. After some trouble at first, these were worn with great comfort and delight. Observation of the pupil with these lenses in place shows immensely diminished nystagmus. After these with daily interruptions had been worn for a few weeks, the first pair with the one-sixth inch diameter lenses, were applied and worn with great comfort. The girl goes to school and dreading the unfeeling words and acts of the scholars she will not wear them at school, but does wear them by choice mornings and evenings at home. The difficulties of therapeutically or mechanically meeting and overcoming the defect are therefore seen to be very numerous and great. But it is a great pleasure to know that this method does to some extent meet them, and the almost cured nystagmus shows the theory I have advanced as to its origin, is substantially correct. I am sure that it would be entirely stopped if the lenses were worn continuously for a long period of time. I shall later report the results as to these experiments.[4]

I will allude to still another method I have in mind: an attempt to stimulate the pigment-secreting function of the cellular elements themselves, and to supply the pigment matter. This would probably succeed if at all, only in the young with plastic tissues. With this end in view I propose to keep up instillations of a solution of pyoktanin blue in a child's eyes, coupled with delicate massage with the closed lid. The tissues, such as the iris and choroid may properly be supposed more responsive to such treatment than those normally non-pigmented. If the experiment do no good it can hardly do harm.

It goes without saying that the acquired ametropia should be corrected. This is a difficult task, but patience and ingenuity will conquer it. Case 8 was wearing "prescription glasses," simple sph. + 2.50 D., in each eye when he came to me. There is a world of significance to this boy in the fact that he is now wearing R. + sph. 5.00 D., ⌒ + cyl. 2.00 D., axis 100°. L. + sph. 5.50 D. ⌒ + cyl. 1.75 D., axis 80°.

In my cases a sufficient time has hardly elapsed to give any results of the simple correction of ametropia, but in all cases there has been the most gratifying increase of power to read, study and sew, the glasses being prized as the most precious of valuable things. There has been an equally pleasant reduction of the photophobia in all of these cases.

I wish that physicians to whom the subject is of interest, will kindly send me all the ocular reports in their power of any cases of albinism that may fall under their notice. I would like to learn if the following tentative conclusions are supported or disproved by the experience and observations of others:

1. Albinos are normally and even exaggeratedly healthy in body and mind.

2. There is no discoverable influence of heredity in the cause or transmission of the peculiarity.

3. The sole pathological influence of albinism is upon the eye.

4. The ocular evils, photophobia, nystagmus, ametropia, (especially high degrees of hyperopic astigmatism), and amblyopia, are directly and indirectly caused by the transparency of the iris.

5. The modus operandi of this etiological factor lies, *a*, in the brilliant and diffuse illumination of the fundus of the eye by the non-exclusion of the peripheral rays of light by the faulty diaphragm, producing photophobia; *b*, the lid and muscular pressure upon the globe resulting from the attempt to exclude the light, produce the refractive anomaly; *c*, the effort of the groping eye to localize and definitize the evanescent and indistinct image produces the nystagmus; *d*, and the amblyopia is a necessary consequence of all these combined factors.

6. Proper correction of the ametropia lessens eye strain, lessens photophobia, and increases the power of near-range vision.

7. True prophylaxis and cure must look to the pigmentization of the iris, or to the construction of an artificial opaque substitute for natural faulty irides.

8. The younger the age at which any prophylaxis or treatment is begun, the more promising will be the results.

DR. MURRELL—I did not hear the first part of this paper, but heard only the latter part. I have a case of this kind under observation at home. By wearing the properly correcting convex spheres, about two diopters, ground on blue, her eyes are very quiet and she has practically very good vision. Her eyes are quiet as long as the glasses remain on, but in taking them off the eyes resume their former nystagmus.

DR. RISLEY—In cases of albinism which have fallen under my notice, there has always been present high grades of refraction error and nystagmus. Much relief has usually followed the use of correcting glasses. I have not used the

[4] My friend Dr. Risley, tells me he had an albinotic patient with double cataract, without nystagmus. It would be interesting to know if nystagmus existed prior to the cataracts.

tinted glasses, suggested by Dr. Murrell, but can readily understand that it must give great additional relief in these albinotic eyes on bright days. I was greatly interested at the time in the old lady, an albino, with mature hard cataract in both eyes, to whom Dr. Gould has kindly alluded in his paper. The lens was successfully extracted in one eye. Vision 6-12 was secured with glasses + 1.50 D. There was a large posterior staphyloma at the temporal side of the nerve, so that this patient had evidently been myopic before the occurrence of the cataract.

DR. GOULD—I would like to ask the gentlemen when they have such cases to please send me a report of them.

TUMOR OF THE IRIS.

Read in the Section on Ophthalmology, at the Forty-fourth Annual Meeting of the American Medical Association.

BY J. SCHNEIDER, M.D.
MILWAUKEE, WIS.

Tumors of the iris not caused by infection, such as syphilis or tuberculosis are very rare in our clinical experience, and when seen the majority have arrived at that stage of development when the integrity of the eye has been so changed that in order to arrest farther and more serious consequences there remains but one alternative, that of enucleation. In the literature on the subject I have not been able to find a similar case, and in my personal experience but this one, where after the removal of such a tumor from the iris there has remained useful vision; and in the light of these facts I consider the following case very unique in its clinical and anatomical results:

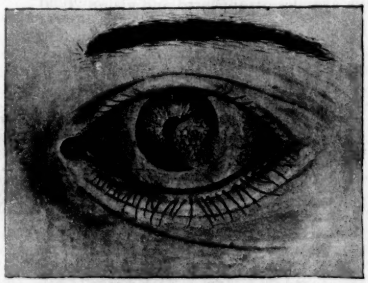
Miss M., of Iron Mountain, Mich., consulted me with reference to a disturbance in the vision of her left eye. On awaking the morning of the 29th of March, 1892, she noticed the sight of the eye much reduced and objects seen with it appeared a dark red color. On March 30, 1892, the patient came to me, when I found the following conditions: R. E., normal; L. E., ability to distinguish the movement of a hand at ten feet; peripheral perception of light normal; no pain; no inflammatory symptoms. The anterior chamber was filled with blood; external layer of the cornea normal, but the lower temporal quadrant of the middle and internal layers were hazy, the haziness extending four or five mm. into the cornea; tension somewhat increased.

After ten days' treatment the blood in the anterior chamber had disappeared, at which time I was able to make an examination of the deeper structures. The vision was 20-30; colors and field of vision normal. In the lower temporal quadrant of the anterior chamber was lying a mass partially filling in the space between the iris and cornea, but touching the cornea near the corneo-sclero junction only, thus leaving a shallow anterior chamber above the growth. It could plainly be seen that the neoplasm had its origin in the ligamentum pectinatum iridis, and extending nearly to the sphincter-pupillaris, filling almost completely the lower temporal quadrant. In consistence it appeared medullary, reddish yellow color, shaped similar to a half coffee bean with the flat side lying directly upon the iris. The portion of the growth nearest the corneo-scleral junction being pressed upon by the cornea was flattened and grayish white in appearance: the remainder appearing very vascular and studded with papillæ. With a light reflected directly upon the growth it could plainly be seen that the tumor grew directly out from the iris. The longest diameter was 9 mm., the shortest 5 mm. The crystalline lens and vitreous were apparently normal; reaction of pupil to light, and appearance of iris as far as the periphery of the tumor were normal. The outline of the optic disc in the lower temporal quadrant was blurred; this cloudiness, for the distance of a disc diameter, extending into the retina and finally blending by means of white streaks into the normal tissue of the retina.

The patient was 16 years of age, menstruated regularly since her twelfth year, rather anemic, had never had any severe illness, body well nourished, family history tuberculous, but repeated examinations for symptoms of phthisis and syphilis always giving a negative result.

The parents state that at the age of 5 years the girl was injured in the left eye with a fork; five months later they noticed a small brown spot near the pupil. This spot did not change till four years ago when with no apparent cause it assumed a flesh color and began to increase in size. After several examinations I recommended, especially on account of the family history, that the growth be removed, but it was not agreed to by the parents and for some time the patient passed away from observation.

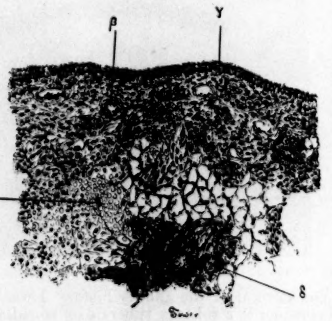
On March 24, 1893, the patient returned, complaining of a dull pain in the eye, tearing, sensitiveness to light with recurrent hemorrhages (the patient could produce a hemorrhage at will by pressure upon the growth). During the period of her absence the neoplasm had grown in all directions, extending upwards so as to cover one-third of the pupil; tension increased, cornea hazy and vision reduced to less than one-half of the normal. The optic disc and retina showed marked symptoms of pressure atrophy. We have to take into consideration that we have before us a solid, flesh-colored tumor, very vascular and probably not the product of a general dyscrasia. The tumor is definitely located, non-pigmented, the surrounding parts, i.e., the iris showing no pathological changes.



On account of the family history I was inclined to consider it a solitary tubercle or so-called granuloma. The negative results of the physical examinations would not be positive proof against a tubercle, for we know from Gradenigo, Perls, Haab, Cohnheim, Knapp and others that tubercular degeneration can be localized in the iris without any constitutional symptoms. Pudden, Haab and others affirm that granuloma have for their origin the irritating effects of some microörganism. Second, granuloma are poorly organized neoplasms, infectious, inoculable and invade neighboring tissues, especially those with which they are in direct contact. The granuloma undergoes, on account of its poor vascularization, cloudy swelling or fatty degeneration. Aside from these authorities, the clinical appearance of the neoplasm made me doubt the existence of a tubercle. I was inclined to consider it a non-pigmented sarcoma, but the age of the patient and the clinical appearance of the growth were evidences against a sarcoma. We can immediately exclude all neoplasms of the iris such as gumma, epidermoidome cyst, cystoid degeneration and melano-sarcoma.

On March 28, 1893, the growth was removed in the

following manner: after the eye was thoroughly cocainized, at a distance of 1½ mm. from the corneo-sclero junction I made a linear incision, passing partially through the base of the tumor. With an iris forceps I attempted to seize the mass but it being so fragile, only small particles could be removed; with a platinum loop I made similar attempts with the same results, it being very evident that the iris was attached to the capsule of the lens. With an iris forceps armed with a double row of teeth I seized the iris on either side of the tumor and with some little effort withdrew the large mass and attached portion of the iris out of the anterior chamber, which mass was then excised as close as possible to the base. (There still remained some parts of the growth broken off by the manipulations, in the anterior chamber.) After the growth and the attached portion of the iris were excised there followed a severe hemorrhage. After the hemorrhage had ceased and the lips of the wound were adjusted, I applied a pressure bandage and put the patient to bed. During the healing process the eye showed but very little reaction and on April 23, 1893 the patient was discharged with tension normal and, with the exception of a small zone, the former corneal haziness had disappeared, some pigmented spots upon the capsule in the coloboma, lower temporal quadrant of disc pale, retina changes disappeared and vision 20-30.



DESCRIPTION OF PLATE.

A. Small hemorrhage in growth just above iris in loose connective tissue, showing very plainly the blood corpuscles.
B. Blood vessel. One of many which are seen scattered throughout and containing blood corpuscles.
C. Surface of growth showing covering cells.
D. Portion of iris from which the tumor probably originated.

The tumor measured 7 mm. in its longest diameter, 5 mm. in its shortest and 3 mm. in thickness; its superficial surface was uneven grayish-white, with the base showing normal appearance of iris. After its removal the tumor was placed in a sodium-chlorid solution, and shortly afterwards given to Dr. Tower of Milwaukee, for microscopical examination, who reports as follows:

"I took small particles, every precaution being taken to prevent them from being contaminated and planted them in tubes of agar, blood-serum, gelatin, and in bouillon both acid and alkalin, and kept them at 37 degrees centigrade and also at about 20 degrees centigrade for several days, and was unable to get any growths except in one tube a little penicellium which was a contamination from without, either from the air or some of the utensils used. I examined stained preparations for the tubercle bacilli with negative results; in fact, did not find any germs at all or evidence of them.

"I have made examinations directly of small portions when fresh, under the microscope, and found a connective tissue and epithelial growth from apparently the iris. Upon section and examination, I find the growth to be a papilloma originating from the sub-epithelial connective tissue of the iris."

We understand by a papilloma, a neoplasm composed of connective tissue with epithelial covering; with very complete vascularization, resembling in construction skin, intestinal and mucous membrane papillæ (Wagner). Papilloma start usually from an injury, producing increased circulation to the part, causing a similar irritation to that produced by dirt in the formation of warts and by decomposing glandular secretions in the formation of condylomæ. Such a papilloma may originate in any tissue as they are found in paroöphoron, cystic tumors of broad ligament (Mouillin), the skin, tongue, larynx, conjunctiva, fore-skin, glans penis, rectum, synovial membranes. If the tumor under consideration was of leprous, tuberculous or actini-mycotic growth, the germs characteristic of these growths would have been found. If it had been any of these, or a syphilitic growth or a rhino-sclerotic, the particles remaining in the anterior chamber would have developed into a new growth.

I consider the prognosis in this case very favorable; especially on account of the age of the patient if there were particles remaining there would be no probability of the formation of a villous carcinoma, into which the papilloma sometimes develop.

THE CLASSIFICATION OF DISEASES OF THE EYE FOR HOSPITAL STATISTICS.

Read in the Section on Ophthalmology at the Forty-fourth Annual Meeting of the American Medical Association.

BY EDWARD JACKSON, A.M., M.D.

PROFESSOR OF DISEASES OF THE EYE IN THE PHILADELPHIA POLYCLINIC; SURGEON TO WILLS EYE HOSPITAL.

The custom has become general among hospitals and dispensaries, of publishing Annual Reports, showing the number of cases treated. The principal value of such statistics, from the scientific point of view, is that they may throw light on the etiology of certain diseases, by showing their comparative frequency in different places and at different times. This can only attach to such statistics when the classification they employ is comparatively uniform, and their value, as well as the ease with which they can be handled in combination, will be enormously increased if the classifications be exactly uniform.

On consulting the reports of the principal ophthalmic hospitals of the country, it will be found that in the main they pretty closely agree as to the naming and relative frequency of the mass of conditions mentioned. There are, however, points of divergence which render the comparison of statistics obtained in the different large cities difficult and often valuless.

To elicit discussion, as well as to urge their importance, certain characteristics of a good classification may be mentioned.

First, it must not be so minute as to be seriously burdensome. With the future development of ophthalmic science, it will be possible, perhaps, to bring

together in our hospital reports many facts that we are now unable to handle with advantage. Subdivisions that are now of great practical clinical importance to the individual surgeon, have not been so widely accepted as to make it possible to enforce them in the reports of many ophthalmic hospitals. And while, individually, we may greatly desire that statistics with reference to this or that special point might be widely accummulated, the burdening of any common scheme with the subdivisions necessary for that purpose would prevent its general adoption.

In the second place, the scheme must have an entirely definite rigid basis, natural so far as possible, but when necessary, arbitrary. There has been widely adopted the plan of general classification upon an anatomical basis; thus we have one great class of diseases of the cornea. Another class for those of the lens, and another for the optic nerve and retina and so on. Then within these general classes, individual conditions are recognized upon a clinical or pathological basis. This general method of classification, we may regard as already adopted by common consent. The difficulty comes in with reference to the choosing of the special characters on which the division into individual conditions shall be determined.

It seems the essential point that must be recognized here, is that there must be no overlapping. For instance, take the classification of iritis; cases of this disease may be classified clinically, as serous, plastic, and purulent; but again they might be classified etiologically, as syphilitic, rheumatic, idiopathic, secondary, and traumatic, and such a classification is frequently adopted, but to recognize all these classes as subdivisions of iritis is to introduce confusion and render your statistics worthless.

One surgeon will be certain to place the mass of his cases in the column of plastic, although a large portion of these may be of syphilitic origin, and another surgeon will record them as syphilitic, although they may all be plastic in their clinical character. In either case, the statistics of one surgeon will be utterly worthless to the other, or utterly worthless for combination with those of the other at the hands of third parties. The only way possible to introduce the different sorts of classification, as clinical and etiological, is to make the one subordinate to the other. As under the head of plastic iritis, to recognize syphilitic or rheumatic as varieties, and to recognize the same varieties under the heads of serous or purulent. But in the general scheme this must be done very sparingly, if at all, on account of the enormous extension of the list that it will entail. Individual reporters may indulge in it to any extent, provided they make their main groups conform strictly to the general scheme. Regarding the case of traumatic affections, there is less danger that cases of such origin will be placed under some other head, so that some departure from the strict single basis of classification may be possible in regard to them.

One of the most difficult questions to deal with in this connection is that of the duplicate representation of cases. The question as to whether each case shall appear only under some single head, or whether it shall be represented under the head of every pathological condition present that is given place in the general scheme.

If statistics are to be used to determine the relative frequency of certain conditions, then every occurrence of such a condition, whether alone or in conjunction with other diseases, should be reported. And probably this would be on the whole the best method of working. If we could only be sure that it was always carried out very little could be said against it. With some conditions as, for instance, persistent hyaloid artery or coloboma of the iris, there is little likelihood of omission. But in the cases of ametropia and heterophoria, conditions that are present in some degree in almost every case, it is not at all likely that they will always be recorded; with these and to a less extent with many other conditions, the relative proportion will necessarily vary with the predilection of the observer. Still this would be largely true, with the plan of giving to each case but a single diagnosis so that, on the whole, it seems best to give up any attempt at making the number of cases balance the number of diagnoses, or the number of patients balance the number of pathological conditions present.

With regard to nomenclature, the writer would favor the adoption of strictly English names throughout, merely adopting foreign terms or anglicizing where this is necessary. In most of the hospital reports the mass of terms are already English; very few attempt to give them all in Latin.

Where two or three different terms are in common use to designate the same condition, it will in some instances be necessary to include more than one, but this should be placed, not as distinct conditions, but as a synonym on the same line, so as not to allow one observer to report his cases under one title and another to report the same class of cases under another title.

Whatever system of classification is adopted, it will in the end be most successful if it be one that is capable of future development, without radical rearrangement or dislocation of its parts. For this reason, perhaps more than for any other, it should at first be simple, and attempt very little refinement, the main point now being to arrange principal groups, so that they will not need future alterations. Subdivision within these groups can be carried on by future conferences, or even may be allowed development at the hands of individual surgeons; since for purposes of comparison these subdivisions may at any time be thrown together, if only there is strict agreement as to the main grouping.

ULCERS OF THE CORNEA.

Read before the Colorado State Medical Society, June 20, 1893.

BY WILLIAM C. BANE, M.D.

DENVER, COLO.

Late Lecturer on Diseases of the Eye and Ear in the Medical Department of the Western University of Pennsylvania; Ophthalmologist to the Chair of Neurology, and Chief Clinical Assistant in Ophthalmology and Otology in the Medical Department of the University of Colorado; Ophthalmologist and Otologist to St. Anthony's Hospital and the House of the Good Shepherd.

The importance of this affection, I believe, justifies a brief review of the subject:

Corneal affections constitute over one-fifth of the eye cases that come under our care.[1]

Of the three principal types of inflammation of the cornea, ulceration is the most common. The numerous varieties of corneal ulcers have been conveniently grouped as superficial and deep.

The superficial class includes those limited to the epithelial layer and are most frequent in young subjects. This is especially true of the phlyctenular ulcer, which occurs in the delicate and strumous.

Not infrequently is the superficial ulcer the result of traumatism, the accident occurring in persons whose blood state is poor, or the wound becoming infected, an ulcer forms. The symptoms of superficial ulcers vary from slight irritation to marked photophobia, lachrymation and pain in and around the eye. The pain is frequently paroxysmal in character. The ulcers differ in appearance, location, course and importance. The phlyctenular ulcer is usually small, circular and of a yellowish gray color. When located at or near the corneal margin, which fortunately is its most common seat, there may be one or more of them. Their course is short, as a rule, and little or no opacity remains. However, the phlyctenular ulcer does not always run so mild a course. The subjects being delicate, if the treatment is not proper, the ulcer may enter Bowman's membrane and finally result in perforation of the cornea, or being central in location, produce such an opacity as to permanently impair the vision. Fig. 1 illustrates this type of ulcer.

The so-called dentritic ulcer, is an exceedingly interesting one. It is limited to the superficial layer of the cornea, and is indicative of a blood state due to or like that of malarial poisoning. The arborescent or dentritic shape of the ulcer is readily recognized by those who are familiar with this form of keratitis. Some excellent papers on malarial keratitis, and keratitis dentritica, have been published within the past thirteen years. The first clear description of this disease was by Dr. Kipp[2] of Newark, N. J., in 1880. The following year Dr. Noyes[3] of New York, and Dr. Hotz[4] of Chicago, published papers on keratitis due to malarial infection.

In 1889, at a meeting of the American Ophthalmological Society, Dr. Kipp[5], read another paper, in which he gave an admirable description of the disease, and stated that of the 120 cases he had treated since his first paper was published, in 90 per cent. of them there was a clear history of malarial infection. His conclusions were confirmed in the discussion by Drs. Noyes of New York, Green of St. Louis, Sutphen of Newark, Theobald of Baltimore and Miller of Providence.

Dr. Kipp, who has made a careful study of this form of keratitis, has observed that "following a paroxysm of intermittent fever, a series of small, grayish, opaque elevated dots, like minute phlyctenulæ appear on some part of the cornea, usually not far from its margin, arranged in a line like a string of beads. On the following day, the elevations have disappeared, and in their place is to be seen a narrow furrow with a hazy floor and grayish ragged edges. At the same time, or perhaps not until some days later, one or several short grayish branches develop on one or both sides of the original furrow. . . . Unless arrested in this stage by treatment, the main furrow and its branches continue to grow in length without, however, increasing in depth or width." . . . "The furrow always remains quite shallow and probably seldom penetrates Bowman's layer." The symptoms are similar to those of phlyctenular keratitis, excepting that there is less congestion of the ball; the pain is more severe especially in the supra-orbital regions. There is also more or less anesthesia of the diseased surface of the cornea, as first pointed out by Dr. Noyes[6] of New York.

Fig. 2, after a drawing by Dr. Kipp, illustrates the ulcer of malarial keratitis. In June of 1892, Haltenhoff[7] published an interesting resumé on keratitis dentritica or herpes. From Haltenhoff's paper we learn that Haab and Hagnauer of Zurich, take the ground that the malarial keratitis of Kipp and his followers, and keratitis dentritica of Hansen Grut, Emmert and others, is nothing more than the ulcerative stage of febrile herpes of the cornea, as described by Homer of Zurich, in 1871. Haltenhoff expresses the opinion that it is likely that the two diseases, keratitis dentritica and herpes cornea, are separate and distinct.

Fig. 1. Phlyctenular Ulcer.

Fig. 2. Malarial Keratitis. (After Kipp).

Fig. 3. Keratitis Dentritica. (After Dunn).

Fig. 4. Superficial Ulcer.

Fig. 5. Superficial Ulcer Healing.

Fig. 6. Ulcus Serpens. Hypopyon.

Fig. 7. Crescentic Ulcer.

Dr. Dunn[8] of Richmond, Va., has reported a case of keratitis dentritica, associated with herpes zoster, in the *Annals of Ophthalmology and Otology* for April of this year, with a drawing, of which Fig. 3 is a copy. In the same number of the *Annals*[9] is a report of two cases of the so-called keratitis dentritica by Dr. Morton of Minneapolis, whose cases were evidently of a mycotic type, as they yielded to local antiseptic treatment. Studied from an unbiased standpoint I am led to conclude that, while the above types of superficial ulcers have many symptoms in common, they are separate diseases, excited by different causes and require different treatment. The mycotic yield promptly to local antiseptic treatment. The herpetic require constitutional, in addition to local treatment. The malarial type will not improve without anti-malarial treatment, as well as local applications.

The following report of a case under this heading is of interest, on account of the malarial history, though twenty years have elapsed since the disease was contracted:

F. G. W., male, aged 46; born in Germany. Family history unimportant. Admits moderate use of alcohol, but denies having had venereal disease. He had an attack of influenza one month ago, and has had several attacks of acute inflammatory rheumatism during the past three years. He is subject to facial neuralgia. About twenty years ago he had a severe attack of malarial fever. *Status presens:* V. R., 6-21; L. 6-6. R. E. There is some edema of the lids; the ocular and palpebral conjunctivæ are very much congested; eyeball is tender to the touch; cornea is slightly hazy; there is a superficial ulcer in the lower outer quadrant of the cornea, extending 8 mm. along the margin and 3 mm. inward, as shown in Fig. 4. Having a history of inflammatory rheumatism, neuralgia and a recent attack of influenza, I ordered sodium salicylate and acetanilid in 10 grain doses every four hours. Locally, cocain, homatropin and aristol were applied. On the following morning the patient reported, free from pain, and of having had his first good night's rest for a month Less congestion and tenderness of the eye; 4 per cent. solution of cocain instilled, and aristol applied to the ulcer.

December 1. Patient had four attacks of pain in the eye, and right side of the head since midnight. The eye, however, looks better. Aristol applied to the ulcer. Applied cantharidal collodion to the right temple. Ordered one-eighth grain of sulph. morphin, and 1 minim of fluid ext. aconite to be taken every two hours if needed to relieve the pain.

December 2. Pain returned at 5 P. M., and continued until 3 A. M. Cornea is clearer.

December 7. The eye has been dressed daily with cocain and aristol. Hot water dressings for half an hour every alternate hour. Internally, one-twentieth of a grain of the bichlorid of mercury six times daily, instead of the salicylate. An attack of pain yesterday was only partially relieved by four one-fourth grain tablets of sulph. morphin taken within six hours. Hot fomentations gave temporary relief. The cornea is clearer, yet the ulcer is somewhat deeper. Being reminded of the effects of malaria, I ordered 3 grains of sulphate of quinin, to be taken every four hours, the evening dose to be 6 grains.

December 10. Patient has been free from pain since commencing the quinin; there is less congestion of the eyeball. Tension is normal. V. R. 6-12. The epithelial layer of the cornea is reforming and the ulcer is smaller. Under cocain, the ulcer was touched with pure carbolic acid on cotton; the cotton was deprived of an excess of acid by compressing it between layers of dry cotton.

December 19. There has been no pain, excepting a slight attack on the afternoon of the 16th. There is now but slight ocular congestion. No tenderness of the eyeball. The ulcer has healed, leaving but a slight opacity. V. R. 6-6. Fig. 5 illustrates the ulcer as it appeared December 12.

On Feb. 21, 1893, patient called to see me while on a visit to the city, his home being in Saratoga, Wyo. An examination failed to reveal any evidence of the eye having been diseased. Vision, 6-6.

We are all, unfortunately, too familiar with the deep ulcer and its destructive work. It frequently is the result of an infected corneal wound, one of the most destructive of which is a wound infected from an old dacryocystitis. The deep ulcer, as already alluded to, is sometimes the sequel of neglected or improper treatment of a phlyctenular ulcer. It, at times, develops during an attack of purulent conjunctivitis and severe forms of exanthemata. An ulcer developing in the course of purulent ophthalmia is a grave complication. And when a gray infiltration makes its appearance in the center of the cornea, during the active stage of the ophthalmia, it is quite certain to melt away.

The serpiginous ulcer, which commonly develops in the old and feeble, is sometimes very destructive. Beginning at the corneal margin, as perhaps a slight gray spot, it spreads toward the center, increasing in depth, the inner border being sharply defined while the outer is filling up. Unless the ulcerative process is checked it soon perforates the cornea, and becomes complicated with inflammation of the deeper structures. Hypopyon or pus in the anterior chamber is likely to appear before the perforation takes place. Fig. 6 illustrates this type of ulcer with hypopyon.

The crescentic ulcer, forming a deep furrow around the margin of the cornea, is occasionally met with in the debilitated. If neglected, it will extend around the cornea and cut off its nutrition. Being of a mycotic type, the progress can be checked by antiseptic applications.

Fig. 7 illustrates a case of this type, in which one application of carbolic acid, followed by daily instillations of warm solution of chlorate of potassium effected a cure in about ten days. In the treatment of corneal ulcers we aim at helping nature by relieving the pain and checking the destructive process. In some, the exciting cause is local, while in others it is constitutional. Others, being deep and very destructive, are at times almost painless. The first indication is to place the eye at rest. In young subjects the accommodation should be paralyzed with atropin and, in all cases, excepting perhaps the superficial phlyctenular ulcer, a protecting compress should be worn to aid in keeping the eye quiet, and prevent friction of the lids. The compress may be held in place by a bandage, adhesive strips, or with a pair of coquilles.

The application of hot water for ten or twenty minutes, every one or two hours, aids very materially in relieving the pain and congestion. The hot water can be applied to the closed lids and brow, or applied direct to the ulcer with the aid of a dropper. When using the latter method, I order 5 grains of chlorate of potassium to the ounce of water. Dr. Lippincott of Pittsburg, has reported excellent results from dropping water at the temperature of 150 degrees directly to the affected area.[10]

In persons beyond twenty-five years of age, atropin should be used in weak solution; at the same time eserin may be used with advantage, in one-fourth to one-half grain solution. The eserin contracts the vessels, relieves the congestion, tension and pain.

Locally, to the ulcer, we have a choice of several well-tried and faithful remedies. They are, boric acid, aristol, ointment of the yellow oxid of mercury, 10 grain solution of nitrate of silver,[11] liquid carbolic acid,[12] scraping, actual[14] and the galvanocautery. After clearing the ulcer of the detritus under cocain, the application of dry boric acid, aristol, the yellow ointment, 10 grain solution of nitrate of silver, or the liquid carbolic acid, will do excellent service in the superficial and moderately deep ulcer. In the deep and rapid ulcers, the actual cautery or galvano-cautery are the most reliable for destroying the unhealthy tissue and stimulating healing. When dacryocystitis exists, which according to Noyes[15] is the cause of infection in from 20 to 32 per cent. of the cases of ulcus serpens, it is essential that the sac be freely irrigated with an antiseptic solution, such as the bichlorid of mercury, 1-5000, once or twice daily, or at each dressing of the ulcer. In cases where perforation is threatened and pus has been deposited in the anterior chamber, paracentesis should be performed to relieve the tension and evacuate the pus.

Constitutional treatment is indicated in nearly all cases of corneal ulceration. The feeble and strumous should receive plain nourishing food with tonics

and cod liver oil. Where there is a malarial history, quinin or arsenic should be administered.

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Steele Block, Sixteenth and Stout Streets.

ON THE PROPHYLAXIS OF CONTAGIOUS DISEASES IN A LARGE CITY.

Read in the Section on State Medicine, at the Forty-fourth Annual Meeting of the American Medical Association.

BY SAMUEL P. DUFFIELD, M.D.
DETROIT, MICH.

The above subject may seem to some who have not had charge of the department of contagious diseases of a large city, a very simple question. It will be found the most difficult problem that comes to the health officer for solution.

An experience of six years as Health Officer of Detroit has most effectually changed many of my views on this subject, and what I now lay before you is the result of practical every-day efforts to reach the point of holding these diseases in check to the greatest degree possible. I am satisfied I have found a method, but as my Board has not indorsed it, it must slumber until some one proves that my views belong to the practical every-day realm and not to theory. I place before you a tabulated record of the contagious diseases, scarlatina and diphtheria, and will refer to it as I go along:

NUMBER OF DIPHTHERIA AND SCARLET FEVER CASES REPORTED TO THIS OFFICE DURING THE YEARS 1891, 1892 AND 1893.

SCARLET FEVER.

	1891	1892	1893		1891	1892	1893
January	44	167	90	July	42	101	. .
February	35	156	72	August	49	61	. .
March	45	258	79	September	57	52	. .
April	57	176	50	October	113	55	. .
May	51	183	48	November	157	41	. .
June	37	136	. .	December	151	88	. .

DIPHTHERIA.

	1891	1892	1893		1891	1892	1893
January	122	115	91	July	53	100	. .
February	93	81	53	August	88	63	. .
March	107	102	67	September	81	62	. .
April	75	100	38	October	121	121	. .
May	97	125	65	November	79	89	. .
June	63	108	. .	December	146	100	. .

In looking this matter over, you will notice that beginning in 1891, with a low rate in January, 1891, it so continued up to July, when it began to rise, and in October we had an increase of sixty-nine over January.

I appealed to the Council for the power to quarantine; it was assumed the Board had power to quarantine, but when you quarantine you must feed and take care of those quarantined. As there had been no appropriation made for that purpose, I asked my Board to recommend that an appropriation of $15,000 be given the Board of Health to establish a contagious disease hospital. This was laid upon the table and the Health Officer was invited to speak before the Council, giving his views on the subject. In the meantime, real estate had improved about my smallpox hospital, which was originally outside the city limits, but in the effort to boom real estate in the city it was brought within the city limits, and being an eyesore to the real estate men "who had the interest of the city at heart" (?)—you, gentlemen, will appreciate this latter remark—my hospital was one night cremated and I left without a place for smallpox patients. Under these circumstances I saw I must quarantine at once, or have the city overrun with an epidemic, and so stated to the Council. They did not grant the request of the Board of Health, but said that should I, as Health Officer, go ahead they would allow all bills, etc. Accepting them at their word, I established quarantine, and have followed it as closely as I could with only one detective, and you see in the table that there has been a notable diminution in the number of cases in 1893 of both diphtheria and scarlet fever (let the reader contrast the years 1891, 1892 and 1891). You will especially notice, from the time I began the system of quarantine, which was in June, 1892, the cases began to diminish, and you will also notice that from that time forward we were under the figures for 1891, and very much lower than the figures of 1892.

Gains in scarlet fever, 601 in five months.
Gains in diphtheria, 299 in five months.

Total gains, - 900

While this is a decided improvement, it is not what could be brought about by other means.

The system of quarantine in a great city is deficient. Unless you have a large police force you can not have absolute isolation of the patient, and in my report for 1891 I recommended that we should have a series of cottage hospitals, virtually a series of cottages which could be arranged in the form of a cross, or otherwise, but in such a way as to be able to separate the play grounds and promenades completely from each other, so that a convalescent scarlatina patient will not come in contact with one recovering from diphtheria.

Since we had to contend with contagious diseases I have been, by observations and facts received from police and detectives, satisfied that these diseases were spread by personal contact of ignorant mothers and fathers of the children. The cottage in which they live is open to the neighbors and others who are not afraid of the placard; "don't believe it is scarlet fever anyway, because the child is playing around the house."

The man goes to work and carries the disease with him. If a skilled mechanic we have had to quarantine him, allowing him only groceries and provisions, and he loses money every day. Now should the isolation cottage system be adopted, we would solve completely this most difficult problem, for the mother could go with the child to the cottage and the home would not become infected with any prolonged sickness in it. Should another child be taken sick it can be transferred to the mother's care at once.

During that time I was being severely criticised for suggesting the cottage hospital system, etc., some one wrote that there should be a general place where workingmen with their well children should go and be taken care of at the expense of the city, leaving the sick child and mother to inhabit the home. The city would have a heavy bill to pay, should it adopt

the system, and we would find we had grasped the short arm of the lever and would be unable to do anything.

The value of any machine is the force it can develop economically for practical use. So the value of any sanitary effort is in proportion as it does good practically, performing practical every-day work.

All the fine spun theories of preventive medicine have not yet solved the problem of perfect isolation of contagious diseases in a great city. The fact that these diseases exist more or less in a city proves this point. One of the most dangerous periods to the general public is the period of convalescence in scarlet fever patients. They are not considered sick and are more apt to come in contact with other persons. If the cottage hospital system was adopted, the diphtheria patients could be keep by themselves, and the scarlet fever also treated the same way.

On large hospital grounds they could enjoy themselves in the open air, etc., and yet no danger of communicating the disease would exist. Such a thing would by this time have been inaugurated and in full play, had not the people of Grosse Pointe placed a barrier in the way which, for the present at least, blocks all progress in the matter.

The city has a lease for ninety-nine years of the Crawford Street property, and as that property is in the city limits there is no danger of being disturbed in the possession of it. Being in the city limits no action, except that of the council itself, can drive it out. (See Howell's statutes.) While, should we go to Grosse Pointe, we would be liable to be driven away any time the supervisors of the town might see fit.

It is the duty of all large cities to establish these places to protect themselves from terrible epidemics, and so thoroughly has this been tested by real estate men and others attacking the right to establish hospitals in great cities, that the highest constitutional laws in the land give every city this as their unquestionable right. New York expends every year $50,000 for the support of Riverside Hospital, and finds this her only way of escape.

HEAT A PREVENTIVE OF CHOLERA.

Read in the Section on State Medicine, at the Forty-fourth Annual Meeting of the American Medical Association.

BY CHAS. H. SHEPARD, M.D.

BROOKLYN, N. Y.

While we hope by reason of good sanitation to escape the scourge of cholera this year, yet the bare possibility of its coming renders all matters of hygiene of supreme importance. Therefore, whatever may contribute to our welfare in that direction is at this particular time worthy of more than ordinary consideration. In order to thoroughly master any disease it is necessary to know somewhat of its characteristics. The home of cholera is in India, and it is there only by virtue of removable causes. The personal habits of the natives are cleanly, but they have no public water supply, and in the larger cities the only water they can obtain becomes polluted from their own excretions. It has been demonstrated that where pure water was furnished the inhabitants, as in Madras and Calcutta, the ravages of cholera were greatly reduced, and the same has been observed in other countries. Dr. Pauline Root, who lived eight years in Southern India, reports that there is always more or less cholera prevalent in that section, and that it is more common after certain religious festivals. Drainage, with the exception of the open sewer, is unknown, and the total lack of sanitation is responsible for the consequent spread of the disease.

The study of the history of various epidemics has made many things plain, but the first radical step towards the understanding of cholera was taken when Robert Koch, the leader of the scientific expedition in Egypt, in 1883, discovered the existing cause of that disease in the comma-like bacillus. Shortly afterward, Reitsch and Nicati, by introduction into the duodenum of cultivated comma bacilli, produced the veritable Asiatic cholera in guinea pigs, and the same effect has been confirmed by other investigators. It has also been demonstrated that the cholera germ is not an animal growth which can be suffocated by fumigating gases, but a vegetable, like the yeast plant, which needs a moderate amount of heat for its development; but apply more heat to the yeast plant or cholera germ, say 140 degrees Fah., and the germ is dead.

The introduction of this specific form of microorganism is found to be necessary for the production of the disease. These germs must reach the intestinal canal alive, otherwise the disease can not be developed. They necessarily pass through the stomach, but an acid medium is death to their existence. In fact they are the most easily destroyed of all the pathogenic microörganisms known. If they safely run the gauntlet of the stomach, they come in contact with an alkalin medium and an albuminoid pabulum in which they develop and multiply with startling rapidity.

These germs always come from the dejections of a cholera patient, and are commonly re-introduced into the alimentary canal of a second person, either in drinking water or in food. It is asserted that they do not enter the blood or tissues of the body, but remain in the lumen of the intestinal canal until they have exhausted their period of existence or killed the patient. They require for their rapid growth and development a large amount of water, an albuminous pabulum, a moderate degree of heat, an alkalin medium and a quick removal of their products. The water is obtained by a rapid outpouring of this fluid from the blood. This large outpouring, together with the irritation by the growing bacteria, naturally increases the peristalsis and starts a diarrhea which at first is painless, but later becomes a pronounced symptom. The continual flow of water into the intestinal canal dehydrates the blood, and prevents the absorption of nutrition, thus at once parching and starving the victim. This readily explains the other symptoms and lesions. It is also plausibly asserted that the accelerated heart beat is due to the small volume of blood which flows with difficulty through the capillaries. The pulse is small and thready, because there is not enough blood to fill the arteries. The dyspnea is marked because the blood carries but little oxygen. The brain is sluggish and irregular in action from an incomplete blood supply. The muscular contractions are painful on account of the intense dryness, and a consequent binding of the fibers as they play one upon another, and the liver and kidneys degenerate from the same cause. The surface epithelium in the intestines de-

generates, dies and desquamates, producing the characteristic rice-water discharges. These symptoms and pathological conditions are identical with a severe attack of simple cholera morbus. Both the simple and Asiatic types of cholera can result fatally through the abstraction of water from the system.

The discovery of the bacteriologist, that the cholera germ will not live longer than twenty-four hours entirely without moisture, and that excessive heat or excessive cold will kill it, relieves us from all fear of taking the disease by breathing the germs in the air. Furthermore, the cholera germs do not produce spores or seeds. Reproduction is effected by rapidly progressing physical extension.

It has been found impossible to cure cholera when at its worst, for under whatever treatment tried, nearly one-half of those attacked die. It is about as hopeless to expect to find a drug or nostrum which can go through the process known as "curing cholera," as to find a drug which can cure a man who has taken a dose of arsenic. Cholera once thoroughly established, drugs are of little avail. So said a prominent physician of England, and this statement but emphasizes the importance of all preventive measures.

In the present state of medical knowledge and sanitary science, cholera can be reduced to one of the least dangerous of maladies, instead of being one of the most dreaded. In theory, it is possible to eradicate Asiatic cholera from the face of the earth, by thorough disinfection.

The most important matter is the establishment of a system of civic sanitation which shall have for its object the prevention of an outbreak of cholera. Cleanliness is the one great safeguard against this enemy of mankind. Its victims are chiefly those who are already in an unhealthy condition or in unwholesome surroundings. If we put the surroundings in good order, but more than all, if we put ourselves in a thoroughly sanitary condition, we can defy the foreign plague.

A healthy stomach has the best guard against the cholera bacillus in the acid condition of the gastric juice. The more effectually to secure this action, large quantities of fluids, even water should not be taken with the food. By swallowing a large amount of liquid at once, part of the contents of the stomach will immediately pass the pylorus, and thus, even provided there were germs in the stomach that would have been destroyed if allowed to remain in contact with the acid of the gastric juice, they may be passed on to begin the work of destruction.

All agree that it is of the greatest importance to treat the first symptoms of looseness of the bowels, and in this treatment the usefulness of acid astringent drinks is most valuable. The bacteriologist finds that the healthy normal gastric juice of an animal's stomach will quickly destroy the cholera germ, even when literally fed on the same. Therefore he says: "Let each individual quarantine his own system, by keeping it clean and healthy at all times. Avoid stimulants, narcotics, dietary excesses and dissipation. Don't overwork."

Quarantine has been aptly described as an elaborate system of leakiness. If complete, it would be impossible for a commercial country, and if incomplete, it gives only a false security, as all foreign and continental experience thoroughly proves. The custom comes down to us from ancient times, and had its origin in the fears of the superstitious. These barbarous regulations are still observed in many European countries, and our experience in New York harbor last autumn was more worthy of the Middle Ages than of the nineteenth century. The futility of such measures is shown by the complete system of isolation enjoined by the Chinese, and yet in no country are destructive epidemics more common. On the contrary the British have almost no quarantine, and at the same time are more exposed by their intimate commercial relations with the rest of the world than any other nation, yet last summer, while we were wildly excited over the matter, the English were more concerned about cleanliness than quarantine. The commercial interests of that country have given wisdom to their manner of dealing with infectious diseases of foreign origin, and the result has been the reduction of quarantine to its simplest form, with special attention to the sanitary condition of seaports, cities and towns.

England has expended, within the last fifteen years, about $450,000,000 in local hygienic improvements, exclusive of a large amount of money spent by the Government to supplement the efforts of the local boards. The fact that last year that country was practically free from the disease, and that there was scarcely any interruption of travel or traffic, serves to show that sanitary measures are of more value than all else beside.

The cholera germ is not the most important factor, but is rather the incidental cause. The question of prime importance is the sanitary condition of the individual. The introduction of a person infected with cholera into a filthy town is like bringing a match into a powder magazine, but there would be no explosion unless the powder was there ready to explode.

Therefore, the most effective means to prepare our people against an epidemic of cholera is an enforcement of all sanitary measures, chief among which is the establishment of large public Turkish baths, which I had the honor of advocating before this body in a paper read last year. In no other way could public funds be applied where so much positive benefit to the whole community would be derived, nor could wealth in any way so completely honor itself as by entering upon large enterprises of this kind. By so doing we would establish a higher standard of health in the community, and not only would the poorer classer be less liable to an invasion of the cholera, but of all other filth diseases as well, such as diphtheria, etc. One of the most effective quarantine measures would be a large Turkish bath, where every immigrant could be thoroughly cleansed, completely disinfected, and his clothing and personal effects sterilized.

Let the people understand that the cholera is noncontagious. The atmosphere is not permeated by germs that endanger health; in fact the air may be thrown out of consideration almost entirely. The source of danger is the food and water that have been contaminated by want of attention to the gastric and alvine discharges of the sick, or to the careless handling of the bedding and linen that have been soiled by them. It is not so much the dirt of the street or the emanation of the sewers as the filthy people themselves that generate disease. The most injurious thing that can be done with cholera excreta is to dump it into the sewage to pollute the rivers of

any town. As it is at present, a large river in a city is an active element in the distribution and propagation of contagion, and the surest prevention of cholera is to burn or otherwise consume all sewage, instead of dumping it into the waterways. Strict attention to cleanliness is of the greatest importance in such cases, and renders cholera no more dangerous than a case of typhoid fever.

In London, during the year 1866, it was found that one family that had escaped from Egypt to dwell on the banks of the river Lee, from which the supply for East London was drawn, so contaminated the water as to produce an epidemic which carried off 6,000 people. The trouble in Hamburg last year, arose from the pollution of the river Elbe, from which the water supply of that famous city was drawn. Seven thousand victims in one month was a fearful retribution for the sin of neglect. The *Indian Medical Gazette* of May, 1887, reports an outbreak of cholera on board a ship at Calcutta, from milk supplied by a native. This milk was proved to have contained 25 per cent. of water from tanks contaminated with choleraic matter. No more cases occurred when the supply of milk was stopped.

Thus it is apparent that the most perfect personal defense against bacteria of all kinds, but particularly of cholera, is a vigorous digestion in a well-conditioned body, and the one fluid that is absolutely fatal to the bacillus of cholera, is healthy gastric juice. Furthermore, it would seem from a series of experiments on themselves, conducted by Prof. Pettenkoffer and Prof. Emmerich of Germany, wherein each swallowed 1 centimeter of fresh culture of comma-bacillus, direct from Hamburg, that measures directed against the germ itself, such as quarantine, disinfection, etc., were less important than attention to hygienic conditions, diet and personal surroundings.

This most desirable consummation is to be attained by the action of heat, through a process that commends itself to every thinking mind, and is at the same time both pleasurable and invigorating. The highest medical authorities in this and other lands have given their fullest indorsement of its use and advantages. It has stood the test in several previous epidemics with eminent success. The great need of our country is large public establishments, where the people can resort at all times, and by a complete course of sanitation ward off all danger of an epidemic.

It is as a preventive that the great value of heat will be demonstrated, and the treatment that strives simply to augment in every way the vital resistance of the system to the successive invasion of choleraic poisoning is what we would most seriously urge. Hot baths, combined with absolute rest of the body should be availed of at the earliest moment.

That heat has manifold uses and confers countless benefits, all will admit. Its effects are apparent throughout the world, but none are of greater service than those directly applicable to the human body. Heat comes directly as well as indirectly from sunlight, which is itself but an electric force. There was a time when mankind worshiped the sun. Through heat we live, move, and have our being; without heat we die. While it is so powerful an agent in health, it can not be thought strange that it is equally powerful in disease, whether as a preventive or cure. Heat purifies the air that we breathe, the water that we drink, the food that we eat, and thus becomes the best and most important disinfectant. Through the medium of the Turkish bath, which is found to be the most perfect form of administering heat to the human body, a record has been made that is astonishing to all who are not familiar with its practical working. The experimental stage has long passed.

Our food and drink are rendered both more palatable and germ proof by the action of heat. We can rely perfectly on heat as a means of sterilization. The germ can not live in food that has been thoroughly cooked, nor will it survive in water, milk, tea or coffee, that has been on the fire long enough to boil. Heat is also death to the cholera germ, if applied in air, steam or water.

Surgeon General Sternberg says that free exposure to air and sunshine is one of the most reliable methods of disinfecting articles which have attached to them the cholera spirillum. Its low death point which he places at 125.6 degrees Fah., justifies us in giving heat the first place as an agent for the destruction of pathogenic microörganisms. Ten minutes exposure to 140 degrees may be relied on for its destruction. Milk or water heated to that point is rendered safe. The germs are also very quickly destroyed by dessication. A weak solution of sulphuric, hydrochloric, or carbolic acid will also quickly destroy the germ.

Dr. J. T. Talbot of Boston, says: "There is no disinfectant or antiseptic equal to heat in a high degree, and in all those poisonous conditions depending on germ life the germs have ten times the resisting power of drugs, although they will in every case be destroyed by a sufficient degree of heat."

Medical Director Bogart reports that when on government vessels in Chinese and Japanese seas, in 1878 and 1885, the cholera broke out among the crew, but was promptly checked by cleanliness and heat. All clothing, bedding and personal effects were subjected to dry heat, and the ships were steamed by their own boilers.

Dr. Louisa R. Smith who was in Turkey during the epidemic last year, states as her observation that the majority of cholera cases can be saved, if proper means are used at the beginning, and that the infection is powerless among people who are careful to cook all water and food. She worked freely among the sufferers, but took only boiled water and hot food.

A Russian physician reports excellent results, in cases of pronounced cholera, from placing the patient in a bath of warm water, (99° Fah.) As a result the vomiting ceases immediately and does not reappear as long as the patient remains in the bath, which ought to be at least half an hour.

According to Dr. Mariano Semmola of Italy, the sheet anchor of physiologic treatment is by means of complete fasting from the very moment the smallest manifestations of diarrhea appear, to be continued at least twenty-four hours after favorable reaction has set in. First in order of treatment comes hot baths, given at 100 to 104 degrees Fah., and repeated as occasion requires. He states that the favorable moment for the hot baths is the first stage of the disease, before the algid period has begun, or when the patient commences to feel a sensation of uneasiness in the epigastrium, with or without vomiting He further says that he has seen hundreds of cases

where the simple diarrhea, which had been obstinate and persistent for several days, and which would later on no doubt have developed into a regular attack of cholera, suddenly disappeared after one or two hot baths followed by abundant perspiration. . . The return to alimentation ought to be made with the greatest prudence, as the smallest error may be fatal. Milk, in small doses, is the preferable form of food when it becomes necessary to recommence alimentation.

The bath was a religious and civil law of the Hebrews. During the epidemic last year in Russia, an investigation was made to ascertain the mortality among the Jews, and it was found to be only forty victims out of a total mortality of nearly a quarter of a million. This fact is a most emphatic comment on the Mosaic laws of cleanliness given that people over two thousand years ago.

A man in England once treated cholera patients by wrapping them up in blankets and placing them before a hot fire, and he claimed to cure every case he undertook. Mr. Urquhart, during an epidemic in Turkey, subjected every member of his household to hot air treatment daily, with the result of complete immunity, while deaths were constantly occurring in his immediate vicinity. During the prevalence of cholera in Cork, Ireland, some years ago, the men employed in cleaning out the brewers vats wherein was heat sufficient to cause profuse sweating, were free from the disease, and the other workmen in the establishment petitioned to be put at that work.

What more fitting than the use of heat for the cremation instead of the burying of the cholera corpse. It has the sanction of the highest authorities, and all sanitarians recommend it, This is complete sterilization of the dead body. Virchow's advice as to the best factor in the prevention of an epidemic and in the destruction of any contagious carrier, is "*Heat or Cremation!*" This has been successful wherever tried.

Over thirty years' experience in the use of heat as a remedial agent, has demonstrated that all diseases of a diarrheal nature are quickly controlled by its proper use, and during the summer of 1865, when cholera was with us to a limited extent, many cases of painless diarrhea were at once corrected by the action of the Turkish bath.

Thus fortified both by theory and experience, we can but conclude that by no other means can one so thoroughly protect himself against the cholera, as well as against all other diseases, as by the frequent use of a hot air bath, otherwise called the Turkish bath.

DIPHTHERIA: ITS SPECIFIC DIAGNOSIS.

A Paper read before the Mississippi Valley Medical Association, at Indianapolis, Ind., Oct. 4, 1893.

BY J. C. CULBERTSON, M.D.

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A disease which our National census tells us has a rating as third in the mortality tables of our country is always worthy of profound consideration.

Diphtheria is a disease of peculiar interest, because of its singularity in being more treacherous and insidious in its manifestations than any other disease that is met with by the practitioner of medicine, simulating somewhat the Irishman's flea, or the thimble rigger's paraphernalia, in which you seemingly see it, and then you don't see it. It is no unusual thing for the most acute diagnosticians to err by mistaking a case of diphtheria for a simple follicular tonsillitis, or a follicular tonsillitis for diphtheria, while papers and discussions without number on the diagnostic differentiation between diphtheria and non-infectious membranous croup have occupied very many hours of precious time at our medical society meetings.

This continuous uncertainty of diagnosis has caused some excellent practitioners to adopt a pernicious habit of diagnosticating and treating all cases of sore throat, whether simple or malignant, as if they were true diphtheria. This might seem to be a safe practice, which is not only bad, but reflects very discreditably upon the diagnostic attainments of the physician who pursues this unwarrantable course. Such a method of procedure may seem justifiable as being a safe one to pursue, in that it is sure to afford favorable treatment, even if the case is only tonsillitis. True, a treatment designed for diphtheria may cure a tonsillitis, but inestimable harm may have been done in causing an unnecessary alarm on the part of the patient's family, and the disagreeable inconvenience that accompanies an isolation of the patient and quarantining of the family, to be followed by the mockery of a disinfection of non-infected apartments, and perhaps destruction of clothing and furniture. So great is the evil attending a safe diagnosis of this character. Furthermore, the Health Office is led astray and official reports made to report falsely. On the other hand, a case of diphtheria diagnosed as a simple tonsillitis may be the cause of breaking up a school or produce an epidemic, with an indefinite amount of sickness and many deaths, in illustration of which the following circumstances came under my observation:

In a seminary patronized alike by day and boarding pupils, a day scholar came to the school having a sore throat, seemingly not severe enough to require professional attention or to keep the child from school. A class-mate sitting near her contracted a severe diphtheria from that apparently innocent and simple sore throat, and which was quickly recognized by an attending physician. At once this patient was removed to the near residence of her maiden aunt, who was a lady fifty years of age and not very robust in health. Within three days this lady contracted diphtheria from her niece, and was so overwhelmed with the poison as to die after an illness of only four days, of what I believe to have been a heart paralysis. In each of these two cases, aunt and niece, there was the characteristic exudation plainly visible in the throat, and there was not discoverable any other source or cause of the infection of the niece than the one named.

Here was a progressive march of but two steps from a case so apparently benign in character as to be regarded as only a sore throat from cold, to a display of disease of the most malignant type, followed by death. The length of time from the contagion of the second case to the fatal termination of the third was but one week.

This narrative is not unlike that which might be told by almost any one present as reflecting a more or less similar experience, and is only told to illustrate the necessity for a correct diagnosis in all cases of sore throat, particularly in cases of children.

It is well known that the visible appearance of the throat does not always indicate the presence of diphtheritic membrane or exudation when true diphtheria is present, for this exudate may be found only in the posterior nares, the fauces, or some location entirely out of sight without the skillful use of a laryngoscope, and even this instrument may not reveal its presence. Hence our reference to diphtheria as an exceedingly insidious and treacherous disease. We do not, with the ordinary visual means of diagnosis, always know just how and where to find it.

Not long ago science came to our aid, and the presence of what is now known and designated as the Klebs-Loffler bacillus is regarded and recognized as characteristically pathognomonic of the disease. This discovery is of inestimable value; but, unfortunately, the ability to make a bacteriological culture and microscopical examination is not possible for the general practitioner of medicine, who is actively engaged in business. And, furthermore, it is no disrespect to say that many practitioners are unqualified to make such examinations, as the whole science of bacteriology is a growth of the last ten years. So that it may be truly said that only a few of our young members have had the advantage of such a training in special laboratory courses as to enable them to do this invaluable work when called upon.

To meet the situation and the exacting conditions required in order to utilize the science of bacteriology, the New York City Board of Health has hit upon a most admirable plan for effecting this purpose, in which it has undertaken to provide laboratory facilities for all practitioners of medicine in that great city, and to do it free of charge to the physicians. So that all the doctor has to do when called to a case that is suspicious is to rub off from the throat and fauces some of the visible secretion, by means of a swab of cotton, and transmit it at once on a culture-medium, that is provided by the Board, to certain drug stores, which are recognized as official depositories for this purpose, and having a direct connection with the special laboratory of the Board, where examinations are conducted. This system is so perfect that within less than twenty-four hours the doctor can ascertain (by telephone) the true character of the secretion he has sent for examination. If his diphtheritic suspicions are confirmed, the necessary prophylactic precautions may be continued.

This plan has been so successful in its workings in New York as to call forth the highest encomiums of praise. Within a period of three months there were examined in the New York Board of Health's laboratory 431 cultures, obtained in the manner described, and there was found the true diphtheritic or Klebs-Loffler bacillus in 301 cases, and what is recorded and reported as false or non-infectious diphtheria in 130.

What a world of satisfaction is revealed in a report like this, and what a deal of success in treatment and in the use of prophylactic measures must have followed this admirable plan of procedure! Yet, further, it inferentially tells us in unmistakable language that every city and county town should have connected with it a bacteriological laboratory, having facilities to take all cultures sent to it for examination, and make early and reliable reports to the physician for whose information the examination is made. Such examinations would be invaluable in all suspicious cases, whether supposed to be diphtheria or some other infectious disease. In fact, the utility of these convenient county and city laboratories could be extended in application to agricultural chemistry. Furthermore, such little laboratories conducted in all our cities and county towns would be of untold value to the world. We should never forget that Jenner and Koch were both country practitioners of medicine at the time they made their scientific observations that have been of such incalculable benefit to our race.

The one purpose of this paper, more than all else, is to direct the attention of the members of the Mississippi Valley Medical Association to the great advantage to accrue to themselves and to the people by the adoption of the suggestions made, and which are believed to be applicable in every city and county town. For it is only by the adoption of some such means as that made use of by the New York Board of Health that the general practitioner can have the benefit of cold science in the making of a diagnosis in cases of suspicious sore throat. Further benefits to be derived from the establishment of small local laboratories might be spoken of as collateral to those mentioned, but the primary purpose, and the one to be most quickly appreciated by the people, will be in its enabling every physician to enjoy the benefits of a sure diagnosis in incipient and doubtful cases of infectious diseases.

BOOK NOTICES.

Transactions of the American Surgical Association. Vol. XI. Edited by DEFOREST WILLARD, M.D. Philadelphia: W. J. Dornan. 1893.

The present volume includes papers by Prof. Senn on direct fixation of the fragments in compound and ununited fractures by the bone ferule, an entirely new method; a paper by Prof. John Collins Warren, on "Hypertrophies and Degenerations of Cicatrices and Cicatricial Tissues;" a paper on the "Surgery of the Gall Bladder," by Maurice H. Richardson, M.D.; a paper on the "Surgical Treatment of Cervical, Thoracic and Abdominal Aneurism," by Prof. Chas. B. Nancrede; a contribution to the "Surgery of the Rectum," by Arpad G. Gerster, M.D.; a "Report of a Case," by Prof. Roswell Park; a paper on the "Surgery of the Prostate," by Prof. J. William White; a paper on the "Bacillus Coli Communis," by Prof. Roswell Park, another case report by the same author, and an article by the same on "Sarcoma of the Tonsil;" a paper on "Retro-Pharyngeal Growths, by J. Ewing Mears, M.D.; a paper on "Operations for Appendicitis without removing the Appendix;" a report of ten cases of "Ankylosis of the Elbow Joint," by Prof. J. S. Wight, and papers by Drs. P. H. Millard, S. J. Mixter, J. McFadden Gaston, H. L. Burrell and A. B. Miles.

These papers have been generally published and are doubtless familiar to the readers of THE JOURNAL. The volume is well printed and carefully edited.

A Treatise on the Science and Practice of Midwifery. By W. S. PLAYFAIR, M.D., F. R. C. P., Professor of Obstetric Medicine in King's College, London; Examiner in Midwifery to the Universities of Cambridge and London, and to the Royal College of Physicians. Sixth American from the eighth English edition. Edited, with additions, by ROBERT P. HARRIS, M.D. In one octavo volume of 697 pages, 217 engravings and 5 plates. Cloth, $4.00; leather, $5.00. Philadelphia: Lea Brothers & Co. 1893.

It is like carrying coals to Newcastle to commend a book to American readers that has already passed through five

editions, and we can only say that it bids fair to be as popular as its predecessors. The author has thoroughly revised this edition.

The principal changes are the results of the statistics of the Porro-Cæsarean and Sigaultian operations. The editor has "abandoned the term *laparotomy*, and the prefix *laporo*, as applied to abdominal surgery, and not to flank incisions, and the term cœliotomy, and the prefix *cœlio* substituted for them." The American editor has also striven against the tendency of the author to favor craniotomy.

The publisher's work is all that could be desired for a text-book of this character.

Clinical Gynecology: Being a Hand-book of Diseases peculiar to Women. By THOMAS MORE MADDEN, M.D., F.R.C.S.Ed. Obstetric physician and gynecologist, Mater Misericordiæ Hospital, Dublin, etc. With 259 illustrations. 80 cl. pp. 561. Philadelphia: J. B. Lippincott & Co. 1893. Price, $4.00.

Dr. Madden who is well known in America, has produced a book that is at once pleasing and instructive. The style is attractive, and the author has taken occasion to incorporate in the treatise much that he has gleaned in his long service at the Mater Misericordiæ Hospital.

The American gynecologists receive full credit for their share in bringing the science of gynecology to its present high position.

In regard to electrolysis for fibro-myomata, the author regards it as sub judice. While in twenty cases he has seen a cessation of the bleeding, he has not seen complete subsidence of the tumor in any case.

The author's conservatism leads him to doubt whether hysterectomy should be practiced for the cure of fibroids, when as is well known, the active existence of the fibroid is limited. On this topic he quotes in full from Dr Mundé of New York, with entire approval. But it is well known that many changes of opinion have occurred in the last decade upon that subject.

The volume in spite of the evident ignoring of European Continental literature, is a valuable and welcome addition to the surgeon's library.

Anæsthetics and Their Administration: A Manual for Medical and Dental Practitioners and Students. By FREDERIC W. HEWITT, M.A., M.D., Cantab, Anæsthetist and Instructor in Anæsthetics at the London Hospital; Anæsthetist and Lecturer on Anæsthetics at Charing Cross Hospital; Anæsthetist at the Dental Hospital of London and at the National Orthopedic Hospital. Cl., pp. 357, price, $3.26. London: Charles Griffin & Co. 1893.

This work is a systematic instruction book for those practitioners and students who wish to learn the practice of the administration of anesthetics, and as well a reference book in doubtful cases. The book is divided into four parts; Part One is devoted to "Preliminary Considerations," which includes a discussion of the properties and impurities of the different anesthetics; the condition of the patient; the nature of the operation for which required; the selection and method of its administration; and the preparation of the patient.

Part Two. The methods of administration of each variety, separately considered.

Part Three treats of the management and treatment of accidents, and

Part Four of the condition of the patient after operation.

This book is extremely useful and is one of the few that is really called for by the necessities of the times.

Syphilis: Its Treatment by Intra-Muscular Injections of Soluble Mercurial Salts. By EDWARD COTTERELL, F. R. C. S. Eng., Surgeon (out-Patients) London Lock Hospital, etc. 16 mo. cl. pp. 36. London: John Bale & Sons. 1893.

In this little book, the author advocates the use of sozoiodol of mercury, with iodid of sodium. The following is his formula:

Sozoiodol of mercury 5 grs.
Iodid of sodium, 10 grs.
Distilled water, 200 min.
10 to 15 minims for an injection.

The patient should receive an injection about once a week for about six or seven weeks or until all skin and throat manifestations have disappeared, when once a fortnight will be found sufficient for another three or four months. After this, once a month will suffice.

A Practical Treatise on Diseases of the Skin: For the use of Students and Practitioners. By J. NEVINS HYDE, A.M., M.D., Professor of Dermatology and Venereal Diseases in Rush Medical College, Chicago. New (3d) edition. In one octavo volume of 802 pages, with 9 plates of which 3 are colored, and 108 engravings. Cloth, $6; leather, $5. Philadelphia: Lea Brothers & Co. 1893.

This popular text-book, as will be seen, has now passed to its third edition. Thirty-five new diseases are mentioned in this that were not treated of in the former editions. The systematic arrangement, clear descriptions and conciseness of statement which have made the work a favorite in the past are still conspicuous.

The author adheres to the classification adopted by the American Dermatological Association, while at the same time he admits that no classification yet proposed has met with general acceptance. The nomenclature is, however, more logical and complete than that in the Nomenclature of the Royal College of Physicians, which is daily growing more and more behind the age.

The metric system is used throughout the book, not, however, to the exclusion of the old system, and the latest investigations have been incorporated.

NECROLOGY.

Dr. D. M. Carter of Modoc, Ind., died October 14.

Dr. James S. Carson of Webster, Pa., died October 17.

Dr. J. D. Arrington of Hartsboro, Ga., died October 16.

Dr. James Henry Bodge of Newton Centre died in Boston, October 19. He was the son of Noah and Lydia C. (Mann) Bodge, and was born at Boston, June 26, 1841. He studied medicine at the Harvard Medical School, graduating in 1867.

Dr. P. F. Hulshizer, a resident of Stewartsville, N. J., died October 22, at the Roosevelt Hospital, New York. He was a member of the Presbyterian Church at Stewartsville. Deceased was about sixty years of age and is survived by his wife, one brother and two sisters

Dr. Charles H. Fisher, President of the State Board of Health of Rhode Island, died at the Continental Hotel, Buffalo, N. Y., at 2 o'clock October 21. Dr. Fisher was 72 years ot age; he had stopped off at Buffalo en route home from the World's Fair and attendance on the Health Congress. He was taken ill on the train. His illness developed into pneumonia which, owing to his advanced age, made rapid progress, early showing signs that it would result fatally.

Dr. A. W. Heise of Joliet, Ill., died October 22, aged 70 years. He was the oldest and best known man in his profession in the State. He was born in Bramsche, Hanover, receiving his education in the universities there. He was house surgeon in the Marine Hospital in 1857. He served in the army as Surgeon of the Twentieth Illinois Regiment, and on the last call as Surgeon of the One Hundredth. After Murfreesboro he was appointed Brigade Surgeon. After Chickamauga he was appointed operator of the brigade and then Inspector of Hospitals and Consulting Surgeon of the corps. In 1872 he was appointed prison physician at Joliet, holding the position many years. He leaves a wife and son with a large estate.

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All members of the Association should send their Annual Dues to the Treasurer, RICHARD J. DUNGLISON, M.D., Lock Box 1274, Philadelphia, Pa.

SATURDAY, NOVEMBER 4, 1893.

THE ARMY AND METEOROLOGY.

Under this heading, a recent editorial in an army journal abstracts the facts detailed in a paper by MAJOR CHARLES SMART, "on the connection of the Medical Department of the Army with the development of meteorological science in the United States," read at the Congress of Science in Chicago, Ill., in August last.

"The credit for instituting the Army meteorological service has been given to GENERAL JOSEPH LOVELL, Surgeon General of the Army, who in 1819 directed surgeons at military posts to furnish quarterly reports of weather; but DR. SMART has found from the records that DR. JAMES TILTON of Delaware, a Revolutionary War surgeon, was the first to suggest a diary of the weather in 1814. He was occupied at the time on the Northern frontier, looking after the interests of the sick and wounded. While DR. TILTON suggested the system he was interrupted in carrying out his idea by the war with Great Britain, and it was left to DR. LOVELL to take up the suggestion and develop its usefulness. In 1826 the first results of this work were given in a register, prepared under the direction of DR. LOVELL. There were eighteen points of observation, including Washington, at that time. In 1840 another publication on the subject was issued, and in the same year an enthusiastic meteorological scientist named ESPY was appointed to collate material on this subject. He established a voluntary system of observation and sought to develop the phases of storms. His first report contained twenty-nine beautifully engraved charts, illustrating the weather of the previous three months. DR. SMART says the merest glance at ESPY'S charts demonstrates the fact that telegraphic communication was the only thing wanting to enable that enthusiast to plan the very weather service that we have at the present day. ESPY'S work resulted in the detail of a board of officers to formulate directions for making observations. Invitations were given to colleges and students of meteorology to coöperate with the department, and an officer was detailed to give his chief time to the subject.

It was in this work of the Army Medical Department that GENERAL ALBERT MYER, then an assistant surgeon, had his attention directed to meteorological science. He had been appointed in 1854 and resigned in 1860 to become the Signal Officer of the Army. During the war the discovery and transmission of information regarding the movements of the enemy's forces absorbed all the energies of the newly-formed corps, but at its close in 1866 GENERAL MYER, who had established a signal corps with himself at the head, and with the recollection of the Medical Department's meteorological work and the suggestions of ESPY before him, secured authority in 1870 to undertake the observation of storms and the prompt signaling of their approach. The observations were reported by telegraph to Washington, and the complete observations were plotted on a map after the fashion of ESPY'S early charts. "MR. ESPY knew how the storm had traveled; GENERAL MYER knew how the storm was traveling." Since 1874 all meteorological reports from Army medical officers have been turned over to what is now the Weather Bureau, and to this day that bureau is not wholly independent of the officers whose labors in the past have done so much to establish it. There are many parts of this vast country occupied by military posts where no station of the Weather Service has been established, and at these places, some fifty in number, the medical officers keep up their observations as their predecessors did in 1814, when the first order for a weather diary was issued; and DR. SMART rightly remarks, "long and faithfully have the medical officers of the Army obeyed that order, and with honorable pride they can point to the results which have been achieved."

THE VERMONT STATE MEDICAL SOCIETY.

This Society lately held its eightieth annual meeting at Rutland. It was largely attended, and made prominent by the number of new members who joined. There are about four hundred and fifty regular practicing physicians in the State, two hundred of whom are active members of the State Society. Great efforts are being made to have every physician in the State join.

The Secretary, DR. HAWLEY of Burlington, in his admirable report, after calling attention to the needs and advantages of an active membership in the State Society, refers to the National Association as follows: "I feel it a duty to call attention to the AMERICAN MEDICAL ASSOCIATION, as the great leading Society of this country; one that we should support in every way with hearty zeal and interest. Its officers, JOURNAL and editors are representative men, whose work we should be familiar with. We should join as members and receive THE JOURNAL, and thus keep in touch and sympathy with medical progress all over the country. I urge every member of this Society to join this ASSOCIATION; I will receive the membership fee of five dollars, from all who are in good standing with our Society, and transmit it to the secretary. You will receive THE JOURNAL weekly for one year. I am sure you will profit very largely by its weekly visits, and have a permanent interest in

a National organization that aims to help and assist every medical man in the country."

The number of papers read at this meeting was larger than ever before, and some of them of great interest. It is a curious fact that consumption appears to be the most prevalent disease in this mountain State. Fifteen per cent. of all deaths come from this disease. The Vice-President's address, (DR. BREWSTER) was devoted to the various plans of treatment found valuable. Drugs were considered of secondary importance to general hygienic measures. Cod liver oil and creasote were used with good effect as adjuvants in treatment.

Much importance was given to the communication of the consumptive bacilli by dried sputa. The great necessity of destroying the sputa by fire was urged, and cases were mentioned of contagion from neglect of this measure. DR. LINSLEY of Burlington, urged that the diagnosis of consumption could be made by every physician, by the microscope, with absolute certainty, and by little practice. He gave a lantern exhibition of photo-micrographs of the consumption bacilli in various stages.

The President, DR. WILDER, gave a very thoughtful address, on medical ethics and duties. The two prize papers were on "Septicemia" by DR. SHERWIN, and "Peritonitis" by DR. POND.

It is a fact of considerable interest that the profession in this State have more than usual self reliance and independence of character. Living in valleys, and on hillsides widely separated by high mountain ranges, they are from necessity obliged to do all sorts of medical and surgical work, often alone and without aid or assistance. As a result, they become very practical men, who are obliged to both think and act quickly and correctly. Dartmouth College on the east side, and Burlington University on the west side of the State, are both excellent medical schools which draw largely from these mountain villages, and send back many clear practical physicians.

It is also pleasant to note that the practice of medicine has in this State retained something of the old-time chivalry and respect which followed the family doctor half a century ago. The physician in these mountain villages is yet the central oracle and authority, and moves about in a circle of devoted patrons, as both healer and teacher.

EXHIBIT OF THE ILLINOIS STATE BOARD OF HEALTH.

The exhibit of the Illinois State Board of Health in the Section of Hygiene in the Columbian Exposition, consisted of eleven maps and twenty diagrams, showing a graphic presentation of the relations between locality, population, water supply, sewerage, etc., with reference to the prevalence and causation not only of typhoid fever, but the zymotic or preventable diseases generally. They are the results of an investigation into the epidemic of typhoid fever of 1891, and include the years 1890, 1891 and 1882. There are six mortality maps, and on the margins are explanatory notes, with the death rates per 1,000 of typhoid fever and other zymotic diseases. Map No. 7 is a population map, and on it is presented the influence of density upon life, and to a great extent the conditions under which people live. Map No. 8 illustrates the water supply system of Chicago and the points in Lake Michigan at which water was taken. Maps Nos. 9 and 10 show the sewer system and the contour of the site of Chicago. The contour map shows the ground made by filling, which is mainly in the central part of the city and along the Chicago River. There is also a chart of the water sheds, and tables giving the rainfall since 1870, and showing its effect in polluting the water supply. Also a table giving the amount of sewage pumped from the Chicago River into the Illinois and Michigan Canal since 1887, all bearing upon the causes that affect life. In some respects the exhibit is unique, and in order to be appreciated must be carefully studied, and there is no doubt that there is here laid the foundation which, if properly utilized by the health officials, will result in a decided improvement of the sanitary condition of Chicago.

THE CLOSE OF THE WORLD'S FAIR.

The object lessons that have been exhibited at the World's Columbian Exposition, have been of the greatest value to all the people of this country. Whether one attended the Exposition or remained at home, its effect will nevertheless be felt by all. Those who studied the exhibits carefully will put the lessons in practice, so far as is practicable at their homes, and thus the whole country will be the gainer.

There is one regret, that is that our noble profession, which is at once a science and an art, did not have a separate department in which all that distinctively belonged to the medical profession could have been collected and exhibited.

The JOURNAL has from time to time since July last, given brief editorial accounts of some of the important exhibits of interest to medical men, but we are fully aware that we have merely glanced at some of the more conspicuous ones. Many that deserved notice have not been reached, and others were almost buried in the great mass. We sincerely hope that our brethren in Europe may induce the management to grant them a separate department at the next World's Fair, which we understand is to be held at Antwerp.

A LICENSE TO PRACTICE MEDICINE INCLUDES SURGERY.

Many are the devices resorted to for the purpose of avoiding the payment of doctors' bills. In the case of Stewart v. Raab, decided by the Supreme Court of Minnesota, Sept. 8, 1893, just reported, it was contended that a person holding a certificate to practice medicine could not lawfully practice surgery, nor recover for professional services which included the performance of surgical operations. The statute under which this question was raised is entitled, "An Act to regulate the practice of medicine in the State of Minnesota," and the first section prescribes that every person practicing medicine in any of its departments shall possess the qualifications required by the Act. To persons possessing these qualifications, certificates shall be issued by a board of examiners, and these certificates authorize the possessors to practice "medicine and surgery" in that State. The terms, "practice of medicine," in the title of the Act, and "practicing medicine," in its first section, are used, the court says, in the broad and popular sense in which they are generally understood, applied and, in fact, defined. One practicing medicine, practices "the art of preventing, curing, or alleviating diseases, and remedying as far as possible the results of violence and accident." Therapy is the treatment of disease, and surgery is therapy of a distinctly operative kind. A certificate which, in terms, authorizes the possessor to pursue the practice of medicine under the conditions of such a statute as the above, necessarily includes surgery. The statute does not require a license or certificate for each department in medicine. Consequently there is nothing whatever in the point that because surgery is not expressly mentioned in the certificate, the holder thereof violates the law when performing surgical operations.

SOCIETY NEWS.

The Tri-State Medical Society.

Annual Meeting, held at Chattanooga, Tenn.

TUESDAY, OCTOBER 17—MORNING SESSION.

Meeting called to order by President Richard Douglas, M.D.

Prayer by Rev. John A. Stevens.

A new constitution was read by the Secretary and made a special order for Thursday morning.

A paper by DR. J. W. RUSSEY of Chattanooga, was read, entitled,

TREATMENT OF PUERPERAL MASTITIS.

Compression of more general utility than any simple measure, both prophylactic and curative. To be efficient for former purpose, must be used early after labor. The chest binder of Dr. Guitéras a most satisfactory means of applying pressure. If abscess forms, pus should be evacuated early and perfectly. Washing the abscess cavity preferable to drainage tubes. If drainage is necessary, horse hair to be preferred to rubber tubing. Great care should be taken in selecting point for incision, if circumstances admit, on account of scar in cosmetic point of view.

DR. W. G. BOGART—said that mastitis could be prevented by proper prophylaxis. The breast is liable to injury by manipulation. He had found only one pump satisfactory, by which the breast is steamed at the same time that the milk is drawn out. In the early stage, try abortive treatment; if abscess threatens, poultice; later, incision, cleansing with peroxid of hydrogen and pack with iodoform gauze.

DR. G. A. BAXTER—The chief point is the free exit of milk; preceding this, the excessive secretion of milk produced by improper diet and the ordinary diet should be used—a liquid diet is especially improper As soon as there is any hardness of breasts anoint them with warm castor oil.

DR. G. W. DRAKE—believes in medical treatment; the internal administration of bichlorid of mercury for the revulsive effect.

DR. RICHARD DOUGLAS—called attention to the anatomy of the gland. Prof. Dugas is entitled to the credit of originating the only rational treatment—that by pressure. The cause is due to the presence of micrococci. The milk forms a favorable nidus for their development.

DR. J. A. GOGGANS, Alexander City, Ala., read a paper entitled,

TREATMENT OF THE DISEASES OF THE UTERINE APPENDAGES,

and presented specimens of ovaries.

These cases all come from preëxisting disease of the uterus, generally endometritis. The treatment of this condition was given: 1, by local treatment; 2, amputation of the cervix. In all diseases of the uterine adnexa, rest and abstinence from sexual intercourse necessary. The three principal points of diagnosis in disease of the uterine adnexa are: 1, repeated attacks of peritonitis; 2, repeated hemorrhages; 3, pain. Indications for operation: 1, those attending pelvic peritonitis, accompanied by tortuous and distended tubes, which may usually be felt in Douglas' pouch, behind the uterus. This condition may be preceded by the history and symptoms of an abortion, a gonorrhea, or a tubal pregnancy; 2, the physical signs of enlarged and tender ovaries due to chronic abscess; 3, the physical signs of prolapsed and tender ovaries, accompanied by irregular hemorrhages and incapacitating pains; 4, some few cases of dysmenorrhea as the principal symptom, with a possibility of its being kept up by chronic disease of the ovaries and tubes; 5, where hemorrhage is the principal symptom, accompanied by the ordinary signs of grave pelvic disease; 6, in a few cases of general peritonitis, preceded by the symptoms of rupture of a preëxisting pelvic abscess, ovarian abscess, pyo-salpinx, or abscess in the appendages, developed during the progress of puerperal septicemia.

DR. RICHARD DOUGLAS—indorsed the position of the author as to the indications for operation, but each case must be decided on its own merits. Removal of appendages will not cure hemorrhage from the uterus, the proper treatment of which is divulsion of the cervix.

DR. P. L. BROUILLETTE—was surprised that in the discussion of the subject, electricity had not been mentioned. In his experience many of these cases had been cured by the use of this agent without curetting or removing the ovaries.

DR. H. BERLIN—thought it a mistake to remove the uterine appendages for hemorrhage Electricity applied with positive pole inside the womb will control hemorrhage by destroying the mucosa if a strong current is used. It would be impossible for the woman to conceive after this.

DR. BROUILLETTE—objected that the faradic current could stop the hemorrhage.

DR. BERLIN—said that his experience was only with the galvanic current which was generally used.

DR. G. W. DRAKE—said that most physicians had not been educated so as to use electricity intelligently. It might relieve hemorrhage by reflex action.

DR. BROUILLETTE—thought that electricity should be tried before any operation was advised.

DR. GOGGANS—in closing the discussion, said he was not in favor of removing the ovaries for mere symptoms—only for organic disease. Most of the general practitioners who use electricity fail to make a differential diagnosis. In the cases presented, the conditions show that no cure could have resulted from the use of electricity.

DR. R. M. HARBIN—presented a case on which he had performed tracheotomy for membranous croup.

Adjourned.

AFTERNOON SESSION.

DR. R. M. HARBIN, Calhoun, Ga., read a paper entitled,

MEMBRANOUS CROUP, WITH REPORT OF CASES TREATED BY TRACHEOTOMY.

Conclusions.—1, membranous croup is almost invariably fatal without surgical treatment, and with medicinal treat-

ment but little can be hoped for; 2, any hope for an expectant plan of treatment is nil, and for the few cases that recover without surgical treatment don't demand a consideration; 3, tracheotomy is a justifiable surgical procedure, and should be performed in all cases where our therapeutic resources have been exhausted and the patient is in danger of suffocation. In hopeless cases it affords a chance for recovery or promotes euthanasia; 4, statistics would be better if infectious diseases were eliminated, as diphtheria, etc.; 5, tracheotomy keeps the patient alive until the pseudo-membrane resolves into a muco-purulent liquid and is expectorated through the tube; 6, in all human certainty, the cases reported would have died without the operation; 7, the importance of after treatment in keeping tube moistened with lime water and the room at an equable temperature; 8, tube should not be removed until purulent nature of sputa ceases, which is about eighth day; 9, a lack of instruments is no excuse for the non-performance of the operation, as a tube only is necessary in addition to general operating instruments.

DR. J. R. RATHMELL—emphasized the uncertainty of the diagnosis between diphtheria and membranous croup, and the almost certainty of death.

DR. W. F. WESTMORELAND—thought the paper valuable, as it called attention to the value of surgical interference. The surgeon was generally called too late. Tracheotomy, in itself, is not a dangerous operation. He had used cords, fastened in the edges of the wound and tied behind the neck, and thought this practice resulted more favorably than with the use of the tube.

DR. H. B. WILSON—while in the Children's Hospital, N. Y., treated twenty-two cases of diphtheria, and all of these died except two, in which tracheotomy had been performed; in another epidemic, out of forty cases, there were but few deaths.

DR. FRANK TRESTER SMITH—thought the operation of little danger. In the statistics, death is ascribed to the operation instead of the cause for which it was performed. Where tracheotomy was performed for foreign bodies, the statistics are good. The operation adds but little to the danger of the patient.

DR. H. BERLIN—said that experiments on dogs in which croup had been artificially produced, showed that the effects of early operation were good. There was little danger from the operation itself.

DR. G. A. BAXTER—read a paper entitled,

TREATMENT OF THE OMENTUM IN HERNIA OPERATIONS,

in which he advocated the removal of the redundant omentum, and reported a case in which a very large hernia consisting only of omentum was removed, weighing four pounds. The omentum was shown, also the patient.

DR. W. F. WESTMORELAND—thought the omentum could be removed in toto without effecting the patient at all, unless it might be from hemorrhage or adhesions. And if any difficulty in reducing omentum, it should be resected, or if there is any suspicion of that, the vitality is effected.

DR. E. E. KERR—asked if the tumor was omentum, or a growth from the omentum.

DR. R. M. CUNNINGHAM—thought the specimen looked like a growth.

DR. W. F. WESTMORELAND—said that in cases of hernia of the omentum the tissue would hypertrophy.

In answer to a question, the patient stated that the growth had enlarged suddenly.

DR. H. BERLIN—stated that in the cases where the omentum protruded as here, the structure was changed and it became a lipomatous growth.

DR. J. A. GOGGANS—agreed with Dr. Berlin as to the pathology of the case. The omentum should be cut off whenever it protrudes.

DR. RICHARD DOUGLAS—raised the point that the stump should be tied in sections, not as a whole. He preferred silk to catgut. Kangaroo was better fitted for sutures than for ligature.

DR. BAXTER—in closing the discussion, said that the tumor was composed of arealor tissue, filled with fat. The kangaroo tendon was not too stiff for tying the stump.

DR. J. R. RATHMELL of Chattanooga, read a paper entitled,

SEROUS AND WATERY DISCHARGES DURING GESTATION; THEIR SOURCE AND SIGNIFICANCE.

The author believes that the profession has been mistaken in accepting the theory that these discharges were from the amniotic sac. Rupture of the sac is always followed by the expulsion of the fetus. There are two other sources from which these discharges can come: 1, from the cervix; 2, from the decidua. Cases are related from the writer's observation, illustrating all three sources.

DR. J. B. COWAN—said the discussion of this question was interesting, but not satisfactory. In one case in his experience he thought the discharge from a case of hydrosalpynx. There had been an occasional gush of water after the pregnancy.

DR. RICHARD DOUGLAS—said that hydrorrhea is frequently met with in women who have had syphilis or gonorrhea. When the amniotic sac is opened, it is followed sooner or later by an expulsion of its contents, If the fluid is amniotic, it will contain urine; otherwise not.

DR. G. A. BAXTER—related a case in which there was a large flow of amniotic fluid following a fall. He had delivered the woman of a dead child, five months later. A partial rupture is not always followed by expulsion of the fetus. He thought a chemical analysis would determine whether the fluid was amniotic.

DR. GEO. R. WEST—stated that a serous discharge from the cervix might be from a cancerous condition.

DR. J. R. RATHMELL—in closing the discussion, thought that it might be possible in the early months of pregnancy that the discharge might come from the tubes. None of his cases ever suffered from gonorrhea.

NIGHT SESSION.

A paper was read by DR. R. M. CUNNINGHAM, Birmingham, Ala., entitled,

RECENT OBSERVATION OF CROUPOUS PNEUMONIA, WITH SPECIAL REFERENCE TO PROPHYLAXIS AND TREATMENT.

This paper was largely statistical, based on an epidemic among the convicts at Pratt Mines.

Conclusions:—1, an unusually severe, general and fatal endemic of croupous pneumonia at this prison, coming on without apparent cause and ending, practically, abruptly; 2, that more than double the percentage of negroes was attacked when compared with the whites; 3, that it affected alike all ages; 4, that it attacked the robust and strong, the same as those in more or less bad physical condition; 5, that it affected those who worked outside the same as those who worked inside the mines; 6, that an unusually large number was suddenly and violently attacked; 7, the pulmonary tissue involved; 8, the unusually high temperature, fast pulse and respiration; 9, the low mortality considering extraordinary severity of the endemic, and the character of the patients.

For prophylaxis, disinfection was tried by washing the cells with a solution of bichlorid and steaming the bedding. The epidemic abruptly terminated, and there have been no cases since, the author believes as a result of the disinfection. Treatment consisted in the administration of stimulants and antipyretics in a majority of cases. For shock, a solution of common salt was injected hypodermically, (hypodermoclysis) one dram to a pint of sterilized water. This he believes will prevent anti-mortem clots, and is a remedy for shock. Specimens of antimortem clots were presented. He concluded strychnin was the best stimulant; baths the best antipyretic. Quinin and antipyrin have no place in the treatment of the disease.

DR. W. L. NOLAN—could not see wherein filling up the system with a saline solution would benefit the patient.

The statistics show the death rate to be about the same under different lines of treatment.

DR. G. A. BAXTER—believed the remedies of the past of little value and Dr. Cunningham has made a discovery of value to the world. It was the chlorid of sodium which affected the condition of shock, not the filling the tissues with the solution.

A paper was read entitled,

SOME OF THE DISEASES OF THE FEMALE URETHRA,

by DR. J. C. LEGRAND of Anniston, Ala. The paper related cases in which relief had been experienced from treatment, and others in which no treatment was of any avail.

DR. J. A. GOGGANS—could not add anything to the treatment. He had used an infusion of pterus aquilina (brake fern), with good effect. We should look for disease of neighboring structures.

DR. H. BERLIN—had tried every remedy. The only remedy in some of these cases is to produce a vesico-vaginal fistula.

DR. RICHARD DOUGLAS—said that in the diagnosis between organic and functional disease, inspection was necessary. Urinary disorders may be produced by abnormal conditions of the surrounding structures. The treatment suggested by

Dr. Berlin is the only rational method. The relief is complete and instantaneous. These cases can retain the urine partially. The opening is not closed for six months to a year.

Dr. J. B. S. Holmes—related a case in which the operation was a success.

Adjourned.

Wednesday, October 18—Morning Session.

Opened with prayer by Rev. C. G. Jones.

Dr. W. Frank Glenn of Nashville, read a paper on the

TREATMENT OF SEPTIC BUBO.

He treats the cause of gonorrhea or chancroid, and makes direct applications to the glands. He advocates rest, the application of ice, the injection hypodermically of 1 per cent. solution of benzoate of mercury, and a compress bandage. When suppuration has taken place, free incision, etc. It would be best to excise the gland as quick as it becomes inflamed. After suppuration the case must be treated as a chancroid.

Dr. R. M. Cunningham—thought it best to remove the gland and if possible get union by first intention.

Dr. J. W. Handley—had not gotten good results from excision.

Dr. R. J. Trippe—thought the best thing to do was extirpation of the glands.

Dr. H. Berlin—said that a clean excision was better than incision with curetting, etc.

Dr. Glenn—was opposed to excision except in the early stage. He does not believe in aspirating.

Dr. J. B. Murfree read a paper on the

DIAGNOSIS AND PATHOLOGY OF FRACTURES NEAR THE ELBOW JOINT.

The elbow is a hinge joint and admits of a variety of motions. It possesses the power of extension, flexion, supination, pronation and limited lateral movement. The bones that form this joint are the lower end of the humerus and the upper ends of the radius and ulna. The humerus has an expanded termination, which forms the condyles; the ulna has the olecranon and coronoid processes; these with the head of the radius form the joint and all are liable to fracture. Fractures near the elbow joint are caused by external violence, (direct or indirect; usually direct,) and muscular contractions rarely. Fractures near the elbow joint are diagnosed by the usual signs of fracture, to-wit: Loss of function, deformity, preternatural mobility and crepitation. All of these may not be present, and the diagnosis may be made by discovering the broken fragment in an abnormal position. The pathology is the abnormal relation of the bones of the forearm, solution of the continuity of the bone, formation of callus, excessive or at abnormal points, inflammation of the bone, occasionally necrosis, inflammation and suppuration of the soft tissues, resulting in hypertrophy and induration, pressure or laceration of the nerves and blood vessels. As a result, the movements are impaired and the joint is stiff or awkward. Abscess sometimes results, and sometimes paralysis.

Dr. T. Hilliard Wood of Nashville, read a paper on

PATHOLOGY OF THE SEQUELÆ OF PURULENT INFLAMMATION OF THE MIDDLE EAR.

The Doctor spoke of purulent median otitis, as a cause of mastoid periostitis, mastoiditis, meningitis, cerebral abscess, phlebitis and pyemia. He then gave the pathology of each and its symptoms. He urged attention to these sequelæ, that important preventive and curative treatment may be adopted.

Dr. G. C. Savage of Nashville, read a paper entitled,

TREATMENT OF THE SEQUELÆ OF PURULENT INFLAMMATION OF THE MIDDLE EAR,

in which he advocated measures preventive of the sequelæ of inflammation of the middle ear, outlining his treatment: for the relief of pain, the free and frequent use of a solution of chloroform in olive oil, one dram to seven, allowing the solution to remain in the ear ten minutes at a time; when there is a discharge, the use of a warm solution of peroxid of hydrogen, letting it remain in the ear until bubbling ceases, and repeating this as long as there is any bubbling. For mastoiditis he recommended in addition to the above, and if this did not relieve, opening of the mastoid.

Dr. N. C. Steele—wanted to impress the importance of attending to cases of suppurating ears. Most of them do not live long so that insurance companies will not insure their lives.

Dr. E. L. Jones—emphasized the fact that in the cases of middle ear disease death resulted frequently, and a proper diagnosis was never made.

Dr. L. B. Graddy—said that until the importance of the subject was realized, patients would continue to die by the thousands annually. The use of olive oil alone is as efficient as with chloroform. Boracic acid renders the tissue a poor soil for the growth of the microörganism and is a good remedy. Peroxid of hydrogen is harmless but of no use.

Dr. W. F. Westmoreland—said that in mastoid cases the operation was postponed too long. In a certain class of cases, operation is necessary. No case of abscess of the brain ever recovered without operation. Without proper drainage the use of peroxid is dangerous.

Dr. B. F. Travis—had used chloroform spray in his own person with good effect. He used bichlorid, nitrate of silver solution, free irrigation and thorough drainage.

Dr. Savage—said that if he had said nothing but to advocate the use of chloroform, he would be repaid for coming and his hearers also.

On motion the report of the Council was fixed as a special order for Thursday at 2 P. M.

Afternoon Session.

Dr. Willis F. Westmoreland of Atlanta, read a paper entitled,

TREATMENT AND PROGNOSIS OF FRACTURES ABOUT THE ELBOW.

He flexes the arm at a little more than a right angle, in a position of rest. This is the best position to prevent deformity. In fractures of the olecranon process, it is not best to extend the arm fully. He uses plaster-of-paris bandage.

Dr. G. A. Baxter—said that there was almost always impairment of motion and deformity. He uses passive motion after a few days, extending the arm at first, later putting it into a flexed position.

Dr. Richard Douglas—said that Baxter's position was weak in first putting up the arm in extension, later in a flexed position. Passive motion was a thing of the past. By approximating the fragments, we use the best means to prevent anchylosis.

Dr. R. M. Cunningham—believes in putting up the fracture, waiting for union and then breaking up the adhesions.

Dr. Murfree—said that absolute rest was necessary to insure repair of the bone.

Dr. Westmoreland—said that anchylosis might be produced by massage in certain conditions. All who put up the limb in extension acknowledged that it was wrong by changing the position. It required more skill than most practitioners possess, to put on a plaster-of-paris bandage properly.

Dr. Richard Douglas delivered the President's Address:

RESPONSIBILITIES OF THE ABDOMINAL SURGEON.

As President, he advocated that a committee should select two or three members to write on selected subjects for the next annual meeting. He also thought it would be better if the Society would change its place of meeting, annually. He emphasized the necessity of thorough training, cleanliness, proper diagnosis, and realization of the responsibility on the part of the abdominal surgeon.

Dr. W. E. B. Davis—thought it criminal for those without experience to open the abdomen.

Dr. C. G. Savage—said this would cut off ambitious young men, as they could not have the experience without operating.

Dr. Davis—said he meant surgical experience, not necessarily abdominal surgery.

Dr. W. C. Townes—protested that it was not necessary to have experience by operating on the living subject. Postmortems were of value.

Dr. R. M. Cunningham—said that this was a specialty and required special skill, special apparatus; in emergencies, the general practitioners should operate, otherwise a specialist ought to be called.

Dr. W. E. B. Davis of Birmingham, Ala., read a paper entitled,

THE TREATMENT OF STONE IN THE BILIARY DUCTS,

in which he advocated in those cases when it was difficult to remove the calculi from the common duct without incising the duct, after making the incision if it was very difficult to stitch up the duct, and if the patient's condition would not warrant a long operation, to introduce a glass tube and pack around it with iodoform gauze without attempting to repair the duct. These cases are usually in a bad condition to stand a prolonged operation.

DR. PAUL F. EVE—read a paper on

CHOLECYSTOTOMY,

and advocated the removal of the calculi whenever detected.

DR. W. C. TOWNES—said that three cases where he had made the diagnosis of gall stones had been relieved by large doses of olive oil. If medicinal measures did not relieve, operation should be resorted to. He presented a patient on whom he had operated.

DR. J. B. S. HOLMES—advocated operation if medicines failed to relieve. If the tube was occluded between the stone and intestine he would use Murphy's button to produce anastomosis between the duct and the intestine.

DR. RICHARD DOUGLAS—believes that the operation of producing anastomosis between the duct and the intestine a flimsy procedure.

DR. J. A. GOGGANS—related a case in which floating kidney had been diagnosed, but which turned out to be a case of gall stones.

DR. R. M. CUNNINGHAM—related a case where operation had been advised, but the attacks ceased after the administration of large doses of olive oil.

DR. W. G. BOGART—would operate in case of impaction.

DR. G. C. SAVAGE—said that the mistake made by those who used oil was that they did not put chloroform in it.

DR. DAVIS—in closing the discussion, said that these cases do not get well, as a rule, without operation. The operation should be short or the patient will die from the shock. You can never know that the last stone has passed.

NIGHT SESSION.

DR. FRANK TRESTER SMITH—presented a case in which there had been

PROLAPSE OF THE IRIS,

which had been partially reduced by pushing it in with instruments and the reduction completed with the use of eserin.

DR. J. W. HANDLY of Nashville, read a paper on

TREATMENT ON VARICOCELE.

The writer first speaks of the many methods and devices advanced by the medical profession in the treatment of varicocele, dividing the treatment into palliative and radical. Laid some stress upon the use of a well-fitting, properly adjusted suspensory as a most excellent palliative measure. In milder cases, besides the above, advises sound physiological advice as regards sexual habits and constipation. Mentions other palliative measures only to condemn them. Describes briefly the earliest operations by Vidal de Cassis and Sir Astley Cooper, afterwards giving at length the operations of Keyes and Bennett, the ones now generally practiced.

DR. W. FRANK GLENN—said that these cases were generally neglected, advised operation, unless very small. If left to themselves, atrophy of the testes may result. If a suspensory is used, it should be well fitted. He sees no use in excising the scrotum.

DR. J. A. GOGGANS—thought most of the cases were due to masturbation. Dr. Glenn had made a good point in not ligating all the vessels.

DR. PAUL F. EVE—said that the spermatic artery and vein should not be ligated or atrophy of the testicle would result. He believes in removing the redundant scrotum.

DR. WILLIS F. WESTMORELAND—removes the excess of scrotal tissue. He expects union by first intention.

DR. R. M. CUNNINGHAM—had examined several thousand men and had found not more than half a dozen with varicocele.

DR. W. C. TOWNES—thought the condition more frequent among the wealthy, due to upholstered chairs and sedentary habits. Dr. Cunningham's cases were from lower classes. He would give tonics and use a suspensory in cases not demanding an operation.

DR. J. R. BUIST—thought Dr. Cunningham's statistics due to the fact that most of his cases were negroes.

DR. EVE—stated that a United States recruiting officer had stated that out of twenty cases examined in one day, eighteen had enlarged scrotal veins. He thought his statement that seven out of ten males had a tendency to varicocele within bounds. All these were not operable cases.

DR. HANDLY—in operating, would prefer local anesthesia unless the patient was very nervous.

DR. L. B. GRADDY of Nashville, read a paper entitled,

ETIOLOGY, PATHOLOGY AND PREVENTION OF OPHTHALMIA NEONATORUM.

The etiology, pathology the same as gonorrheal ophthalmia or gonorrhea of the urethra, being produced by the gonococci—all of these cases are produced by inoculation. Every abnormal discharged, toward the end of pregnancy, should be regarded with suspicion. These cases are inoculated during the washing. He recommended that the lids be washed by a 1 per cent. solution of nitrate of silver which should be left on the lid twelve seconds, after which the eyes should be washed with clean water.

DR. B. F. TRAVIS read a paper on

TREATMENT OF OPHTHALMIA NEONATORUM.

In the early stage he advises cleansing the eyes with a boracic acid solution and the application of cold water. Later the use of strong solutions (40 to 60 grs. to ounce) of nitrate of silver in the purulent stage.

DR. G. C. SAVAGE—in discussing the above paper, stated that there were cases on record where pus gushed from between the lids when they were first opened. He believed that other fluids than gonorrheal would produce purulent conjunctivitis. Crede's method is effective and apparently painless.

DR. J. B. S. HOLMES—thought the responsibility rested with the obstetrician.

DR. RICHARD DOUGLAS—said that the responsibility went back of the obstetrician; that it rested with those doctors who failed to cure their cases of gonorrhea.

DR. R. M. CUNNINGHAM—called attention to the fact that the negroes rarely were blind from this disease.

DR. W. FRANK GLENN and J. B. COWAN—thought the disease always gonorrhea of the conjunctiva.

DR. N. C. STEELE—indorsed the use of strong solutions of silver, 40 to 60 grains.

DR. J. B. S. HOLMES of Rome, Ga., read a paper on

MOVABLE KIDNEY.

Pressure on the kidney always produces nausea and faintness—this is an important point in diagnosis. If much disturbance, and kidney can not be kept in place with a bandage or an abdominal support, the kidney should be extirpated. The operation was described. We should be satisfied that the other kidney is in a healthy condition.

THURSDAY, OCTOBER 19—MORNING SESSION.

Prayer by Rev. W. J. Trimble.

On motion, that a committee of five be appointed, to whom should be referred the new constitution for revision and amendment, also the recommendations of the President and said committee to report to the Secretary, on the morning of the first day, next year, who will have changes proposed published. Carried.

Article IV of the constitution was changed so as to allow the Society to meet elsewhere.

A motion was carried that none be allowed to vote or have the privilege of the floor who have not paid their dues for the current year.

On motion, the Society reconsidered the vote to have the election at 2 P.M., and proceeded with the election of officers. The following were elected by ballot:

President—J. B. S. Holmes, Atlanta, Ga. *Vice-Presidents*—James A. Goggans, Alexander City, Ala.; Dan. H. Howell, Atlanta, Ga.; T. Hilliard Wood, Nashville, Tenn. *Councillors*—W. E. B. Davis, Ala.; G. W. Mills, Ga.; J. B. Murfree, Tenn. *Secretary*—Frank Trester Smith, Chattanooga, Tenn. *Treasurer*—W. C. Townes, Chattanooga, Tenn. *Recorder*—W. L. Gahagan, Chattanooga, Tenn.

The consideration of a new constitution was voted a special order of business for the third day of the next annual meeting, at 9 A.M.

On motion, the Society tendered a vote of thanks to the President for the masterly and courteous manner in which he had presided.

A committee, consisting of Drs. J. B. Cowan, W. F. Westmoreland and W. E. B. Davis, was appointed to draft suitable resolutions of thanks.

AFTERNOON SESSION.

The following committee was announced to revise the constitution: Drs. W. E. B. Davis, R. M. Cunningham, J. B. Cowan, W. F. Westmoreland, W. G. Bogart.

DR. Y. L. ABERNATHY of Hill City, read a paper on the

TREATMENT OF TYPHOID FEVER.

The author claims that it is impossible to diagnose between typhoid and continued malarial fever in many cases. He believes in an aggressive form of treatment, and advocates the use of quinin and mercury in these cases. He also relies on hydrotherapy by the Brand method.

DR. J. B. COWAN—could not indorse the use of quinin.

His sheet anchor is alcohol, using it as coal in a grate, to allow the man to burn this instead of burning the tissues. He gives salicylates in small doses—three and a half grains. He had not seen a case of typhoid fever in fifteen years.

Dr. G. T. Prince—said that a typical case of typhoid fever was rarely seen. The treatment must be varied according to the type. In perforation, laparotomy should be performed. By using potass. bromid first, he could use quinin.

Dr. Reeves—in discussing the paper, formulated typhoid fever as follows: an acute contagious febrile affection derived from an antecedent case of the disease and depending for its communication from person to person upon the presence of a specific microörganism, which is believed to be of well-known morphological characteristics—a *bacillus*—and which can be cultivated outside the human body. The disease prevails less frequently in tropical and sub-tropical countries than in the temperate zone, is both endemic and epidemic in its visitations; attacks, preferably, young persons and those in middle life; is of long duration, but varying between ten and forty days *beyond* the *prodromic* period, which may cover from one to ten or even twelve days. There is profuse diarrhea, or, at least, a relaxed state of the bowels, with "pea-soup" or "ocher-colored" stools; and at all stages a marked susceptibiiity to the action of laxative medicine; intestinal hemorrhage in many cases, and in a few perforation of the bowels; epistaxis, either slight or profuse; tympanites, with gurgling produced by pressure over the ileo-cecal valve; dullness of hearing, with mental hebetude, or morbid vigilance; headache, disappearing during the second week; delirium, either mild or violent, with *subsultus tendinum;* rose-colored lenticular eruption during the second week, coming out in crops and disappearing in the same order; fever-curve showing steady elevation of from one to three degrees in the evening with a fall of the same number of degrees in the morning for the first four or six days, and unlike the curve of any other acute febrile or inflammatory disorder; cough and bronchial râles; singular prostration of muscular strength; early heart-failure and a dicrotous pulse. The tongue soon becomes dry, and shows, in grave cases, a brown stripe in the middle, with *sordes* on the teeth and gums; in fatal cases, death occurs during the third or fourth week, with the constant and characteristic lesion of the small intestine involving Peyer's glands; and with enlargement of the spleen. Convalescence is tedious; true relapse is not infrequent, and the disease affords as perfect immunity from subsequent attack as does scarlet fever or smallpox.

Not a New Disease.—Belief in the spontaneous origin of the disease has greatly retarded the discovery and general diffusion of correct knowledge on the subject; for, by parity of reasoning, such faith is without substantial support when the question is studied with the life history of the human race. On the other hand, the doctrine of permanency of original types of contagious diseases has, probably, as remote antiquity for its origin, as stable a foundation for all future time, and as many unanswerable arguments in its support, as the doctrine of the permanency of the different types of the human race—each type with its entirely different capacities, physical and mental, and known to have existed for at least five thousand years.

Dr. P. L. Brouillette—believes the cold bath the best antipyretic, prefers using first a tepid bath and reducing the temperature of the water. Quinin must be given in large amount within an hour to get antipyretic effect, as it is eliminated.

Dr. Willis F. Westmoreland—said that tepid baths were less depressant than the cold baths.

Dr. R. M. Cunningham said: 1, we have typical typhoid fever; 2, we have atypical typhoid fever; 3, we have typical malarial fever; 4, we have atypical malarial fever; 5, we have an unknown fever that I call continued. Baths best antipyretics. Whisky and strychnin best stimulants. Four hundred and thirty-four cases observed in four years. Eighty typhoid—ten deaths, eight complicated. One hundred and seventy-eight continued—two deaths, both complicated. One hundred and seventy-six uncomplicated fevers—no deaths. Does not believe in antiseptic treatment. As a routine treatment he uses the mineral acids.

The following resolutions were adopted:

"For five years annually the Tri-State Medical Society has enjoyed the hospitality of the medical fraternity of Chattanooga, a hospitality that is only bounded by their opportunity to share the liberality and magnificent hospitality which particularly characterizes the Chattanooga doctor. There must be something in the atmosphere or water, or more likely in the fact of this city being surrounded by these grand mountains which have the effect to draw out and develop the better qualities and higher instincts that belong normally to every man's heart, and these magnificent surroundings have succeeded in developing a body of medical men that are not only an honor to the profession, but have and are now giving to this beautiful city a reputation that has become national.

"The Tri-State Medical Society feels to-day that we have unloosed the cable, and from this day forward we are afloat and will have our annual home in Georgia, and then Alabama, and that we fully appreciate the sensation of a child leaving its paternal home and going out into the world to try its fortune. We fully appreciate the importance of this step, and as we leave the home nest and wander in other lands, our thoughts, our affectionate remembrance and our prayers will center here, and our thanks and gratitude and heart-wishes for the medical fraternity of Chattanooga will ever grow brighter and brighter as the years go by. Be assured that in the heart of every member of the Tri-State Medical Society the memory of many kindnesses and splendid hospitality will ever remain a green spot, the memory a thing of beauty and joy forever."

Dr. W. C. Townes read a paper entitled,

PATHOLOGY AND TREATMENT OF GOITRE.

This paper is based on the observation of cases seen during a recent trip through the region of the Alps. For treatment, extirpation of the gland is advocated.

Dr. J. E. Reeves—said Dr. Townes' paper was of more than common interest, notwithstanding the rarity of the disease in this country, and fully represented the general knowledge on the subject.

The Secretary was voted a salary of one hundred dollars for the current year.

NIGHT SESSION.

Dr. C. W. Barrier of Columbus, Ga., read a paper on

THE ELASTIC DRESSING APPLIED TO INCOMPLETE ANKYLOSIS OF THE KNEE,

of which the following is a synopsis:

The elastic dressing applied to incomplete ankylosis of the knee. Report of case. Description of the elastic dressing, with method of using it. Indications of treatment of such a case: 1, arrest the atrophy of the synovial membrane and restore it to its function; 2, break up existing adhesions and prevent the formation of others; 3, restore the tendons of the hamstrings to their normal length; 4, arrest of the atrophy of the tendon of the quadriceps and stimulate it to antagonize the hamstrings. Conclude by showing how these indications are met better by the elastic dressing than by an operation or a fixed dressing. Query: If such dressings were more frequently applied in incipient ankylosis, would there not be a less number of cases of complete ankylosis, and still fewer radical operations for same?

Dr. R. J. Trippe—had had good results from breaking up adhesion.

Dr. J. B. Cowan—said that many of these patients were neglected, and as a result there were many deformed joints.

Dr. Willis F. Westmoreland—insisted on the importance of prevention. A trivial injury may result in destruction of the joint.

Dr. H. Berlin—related his experience with the

ACTION OF THE GALVANIC CURRENT ON THE UTERINE TISSUE.

The paper contains the results of experiments. A current was passed through the uterine tissue which was then subjected to microscopic examination. In one case the experiment was made on the living subject previous to hysterectomy; in other cases the cadaver was used. He concluded that curetting would accomplish the result much more quickly.

Dr. Geo. R. West—said that according to experiments electricity acted not only at the poles, but also throughout the tissue.

Dr. W. E. B. Davis—believes that electricity has its place in gynecology, but that many claim too much for it. Curetting is preferable, although the same result might be accomplished in many cases by electricity.

Dr. J. B. Cowan—thought the current was used in a milder form than to produce necrotic tissue.

Dr. W. F. Westmoreland—after spending much for electrical apparatus, had concluded to let it alone in most cases.

Dr. G. W. Drake—said that electricity had accomplished most by those who had studied the subject. It should not be condemned from the reports of those who did not understand its use.

DR. J. P. STEWART—thought that there was no doubt of the tonic effect of electricity.

DR. H. BERLIN—said that he only wanted to prove the microscopical effect of the current and had found necrosis. He had no effect from faradism.

DR. J. B. COWAN of Tullahoma, Tenn., made an address on

MEDICAL ETHICS.

He spoke of the violation of the code in consultations. It is the duty of the medical societies to lift up the profession. We get legislation to protect the people and to elevate the profession so that the code could operate on the members of it. He called attention to the splendid organization of the profession in Alabama.

DR. W. F. WESTMORELAND—thought the profession had reached that point where the code of ethics as a published document should be abandoned.

DR. G. A. BAXTER—said that a consultant could steal a patient within the code of ethics.

DR. J. R. RATHMELL—believed in a written code. The code is a statement of the principles which are the written result of the experience of the profession.

DR. J. P. STEWART—said the written code was of value to protect us from those who violate it.

DR. G. W. DRAKE—said that any argument for abolishing the code could apply equally to any written law, even to the Word of God. We object to consulting with irregulars, not on account of their method of treatment, but on account of advertising.

DR. Y. L. ABERNATHY—stated that we should follow the golden rule. A code was needed for violators of the law.

The following were read by title:

"Report of Psychical Science," Chicago, August, 1893, DR. JOHN E. PURDON, Cullman, Ala.

"Significance of Albumen in the Urine in Pregnancy," DR. E. T. CAMP, Gadsden, Ala.

On motion, it was decided to hold the next meeting on the second Tuesday in October, 1894.

Adjourned.

Southwestern Association of Railway Surgeons.—First meeting held in St. Louis, Oct. 26 and 27, 1893.

The Southwestern Association of Railway Surgeons was organized at Walnut Ridge, about 1890, as the Missouri and Arkansas Railway Surgeons' Association, afterwards changed to the Missouri, Arkansas and Texas Association, and finally to the present name, this meeting being the first under its new name. Previous meetings have been held at Walnut Ridge, Newport and Fort Scott, Ark., and one at Springfield, Mo. The organization is on the plan of the National Association of Railway Surgeons.

The meeting was called to order by the President, Dr. F. J. LUTZ, and Dr. W. B. Outten for the Committee of Arrangements announced that a feature of the meeting would be the holding of surgical clinics at the different hospitals, in place of occupying the entire time in the reading of papers.

DR. A. B. SHAW, President of the St. Louis Medical Society, welcomed the Association to the city, and spoke of the importance of railway surgery and the growth of railway surgeons' associations.

The President then read his address. In explanation of the necessity of the existence of the Association, he referred to the underlying principle of all the mechanical arts—namely, the subdivision of labor. The rapid strides which the healing art has made no longer enables even the most brilliant mind to encompass the knowledge requisite to successfully cope with both disease and injury, and the subdivision into medicine and surgery was but the first step in the recognition of the fact that perfection in either means exclusive devotion to and discipline in the one. It is true the general surgeon so-called is the safer counsellor and a more successful practitioner of his art than he whose attention is riveted from the first to but a single subdivision of surgery. The later is apt to forget and overlook those general principles of surgical knowledge which are the foundation for the successful application of our art. In the treatment of surgical affections the curative factors which determine the pathological change or the traumatic alteration of organs or members have occasioned a difference in the line of action. Tissues altered by disease offer a different resistance to the invasion of wound accidents than tissues whose vitality has been interfered with by injury. The removal of an ovarian tumor is a different kind of surgery from that which effects the removal of a crushed limb. In the one the tissues immediately concerned and the system at large have been prepared by a slow but constant alteration for the invasion of the surgeon's knife, their power of resistance has been increased. The healthy limb, suddenly crushed with its normal power of absorption and its normal nerve supply, which transmits the sudden insult and the unexpected injury with the rapidity of thought to the central nervous system presents a more dangerous field for the exercise of the surgical art.

AFTERNOON SESSION.

The afternoon session was held at the City Hospital, and consisted of demonstrations of surgical cases by local surgeons. Cases illustrating conservative surgery, were presented by Drs. W. B. Outten and W. A. McCandless.

DR. MCCANDLESS also demonstrated a simplified method of applying plaster-of-paris jackets, adapted to the cases of injury to the spine in railway accidents, or when the usual apparatus for extension is not at hand. A piece of toweling, or any strong cloth, is stretched between two firm bodies, a few feet from the ground. Upon this the patient is laid face downward, the long way of the cloth, and extension is secured by his pulling upon the edge of cloth above his head. A plaster bandage is now applied around the body, taking in cloth and all, the cloth above and below the bandage is cut away, and the patient is ready for removal.

An interesting case of a man injured by a train three years ago, was presented by DR. H. H. MUDD. Six months after the accident a tumor developed on the right side of the body, inside of the eleventh rib, and three inches from the vertebral column. One year later the abscess discharged, leaving a sinus. An operation for supposed necrosis of the rib opened up the sinus. Probing developed the presence of a calcareous deposit, felt about four inches from external opening. At the time of present operation, there was discharged through a drainage tube, a milky substance, found to be the contents of the intestinal canal. A tube was inserted into the stomach, into which air was forced, and a lighted match at the end of the drainage tube was extinguished by the current of air—also colored fluid pouring into the stomach, was almost immediately discharged through the drainage tube, indicating that the sinus was connected with the stomach. The operation consisted in an incision, four inches in length, from a point two inches from median line, downward and outward, parallel to lower costal margin. A soft rubber catheter inserted into fistulous tract, from the external opening, was found to enter the duodenum at about the juncture of ascending and descending colon. The hole in the intestine, large enough to admit two fingers, was closed by suture.

EVENING SESSION.

DR. W. B. OUTTEN read a paper: "Injuries to Back Without Psychic Elements."

DR. L. BREMER presented a paper on "Traumatic Neuroses in Court." (This paper will appear in THE JOURNAL).

SECOND DAY—OCTOBER 27.

The second day's proceeding were devoted principally to surgical clinics at the Post-Graduate and Alexian Brothers Hospitals, and consisted of operation for removal of large lipomatous growths from the neck, by Dr. H. Tuholske, and a gastrostomy and a tracheotomy for stenosis of pharynx by DR. F. J. LUTZ.

The following papers were presented: "Report of a Case of Abscess of the Brain," by DR. R. L. JOHNSTON Rolla, Mo.; "Compression of the Brain," by DR. J. E. Teft of Springfield, Mo.

Abstract to be furnished.

Officers for the ensuing year were elected as follows: President, Dr. C. A. Smith of Tyler, Tex.; First Vice-President, Dr. E. A. Neely of Memphis, Tenn.; Second Vice-President, Dr. W. T. Jameson of Palestine, Tex.; Secretary, Dr. J. A. Lightfoot, Texarkana, Ark.; Treasurer, Dr. L. H. Callaway, Nevada, Mo.

Place of meeting, Memphis, Tenn.

At a Business Meeting of the Philadelphia County Medical Society held Oct. 18, 1893, the following resolutions offered by Dr. S. Solis-Cohen and seconded by Dr. R. N. Keely were unanimously adopted:

WHEREAS, Dr. James E. Reeves of Chattanooga, having denounced the so-called "Amick Cure" for consumption as a quack nostrum, and stated that its proprietor was not a physician in good and regular standing, was accused of criminal libel; and

WHEREAS, The grand jury has ignored the indictment brought against him, be it

Resolved, That the Philadelphia County Medical Society congratulates Dr. Reeves on his bravery, a bravery unfortunately too rare at the present day, and tenders him sympathy in the persecution to which he has been subjected;

Resolved, That no person who makes, deals in, or advertises as a cure a quack nostrum, that is to say a preparation the composition of which is kept secret, can be termed a physician in good and regular standing; because such action is *ipso facto* sufficient to work forfeiture of membership in this or any other county medical society governed by the laws of the American Medical Association.

Resolved, That a copy of these resolutions, duly attested with the signatures of the President and Secretary and with the seal of the Society be forwarded to Dr. Reeves, and that they be handed to the press for publication.

Signed: DE FOREST WILLARD, President.
Signed: T. B. SCHNEIDEMAN, Sec'y.

Southern Surgical and Gynecological Association.—Sixth annual meeting will be held in New Orleans, La., Nov. 14, 15 and 16, 1893. The program, which we have in type, we are compelled to omit this week. It will appear in our next issue.

The Idaho State Medical Society was organized at Boise, September 13, with the following officers, viz: President, Dr. W. W. Watkins, Moscow; Vice-President, Dr. I. H. Moore, Pocatella; Secretary, Dr. C. L. Sweet, Boise.

The Next Meeting of the Fox River Valley Medical Association, will be held in Aurora, Tuesday, Nov. 7, 1893. Excellent papers will be presented on modern therapeutics. Election of officers and other important business.

H. L. PRATT, Sec'y, Elgin, Ill., Oct. 14, 1893.

Iowa and Illinois Central District Medical Association.—The regular quarterly meeting of the Iowa and Illinois Central District Medical Association was held at Rock Island, Ill., Tuesday afternoon, Oct. 31, 1893. A paper by Dr. E. S. Bowman, "Prevention of Tuberculosis," was read and discussed.

G. L. EYSTER, Sec'y.

Suffolk District (Mass.) Medical Society.—At the first regular meeting of the season of the section for clinical medicine, pathology and hygiene of the Suffolk District Medical Society, held at the medical library, 19 Boylston Place, October 18, papers were read by Dr. George M. Garland on "Malignant Endocarditis," and Dr. G. Liebmann on "A Case of Dysphagia and Dilatation of the Esophagus." The report of the committee appointed by this section to secure from the Legislature improved sanitary legislation was received from the Chairman, Dr. David W. Cheever.

The Hartford County (Conn.) Medical Association held its 101st semi-annual meeting at the Y. M. C. A. Hall at New Britain, October 26. Dr. A. G. Cook of this city, read a paper upon "Fixture in the Treatment of Fractures Into Joints," and Dr. M. M. Johnson delivered an essay upon "Surgical Diseases of the Kidneys." Dr. Henry Douttell of New Britain, gave an essay upon the influence of the great industrial establishments on the people from a sanitary standpoint, and Dr. E. P. Swasey of New Britain spoke upon gun-shot wounds of the subclavian artery and vein.

The St. Lawrence Co., N. Y., Medical Society held its semi-annual meeting at Ogdensburg October 17. Addresses were delivered by Vice-President Dr. F. F. Drury, Dr. E. H. Bridges, Dr. J. M. Mosher, Dr. R. H. Hutchins and Dr. H. S. Stilwell, Ogdensburg; Dr. John O. Rose, Rochester; Dr. S. W. Close, Gouverneur, and Dr. M. E. Smith, Colton.

The Northwestern Medical and Surgical Society of New York held a meeting at the invitation of Dr. R. C. Cole at the Marlborough Hotel, October 18. Dr. S. W. Leo presided. Dr. William Stevens read a technical paper on the subject, "When death results from ether, administered as an anesthetic, is it due to idiosyncrasy or pathological conditions?" Dr. Stevens referred to the sudden death of Colonel Elliott F. Shepard last spring as a remarkable case. He said he had never seen a death from ether in his seventeen years' experience.

Reading Medical Association.—The Reading Medical Association held a special meeting October 24. Drs. Howard S. Reeser, C. W. Bachman, and Horace E. Schlemm were appointed a committee to secure physicians to act on the dispensary staff of the new Reading hospital dispensary, which has recently been opened on Court Street below Sixth.

CORRESPONDENCE.

The First Professional Organization.

CAMDEN, N. J., Oct. 23, 1893.

To the Editor:—In the issue of October 21, there appeared an article credited to the *Norwich* (Conn.) *Bulletin*, on "The First Professional Organization," which states "that the first step toward professional organization and protection in Connecticut was taken by Norwich physicians," who met on March 24, 1774, pursuant to an advertisement of March 3, to consider and prefer a memorial to the General Assembly to regulate the practice of physic. It is stated that "their demand was for the appointment of a committee legally authorized to examine and approve candidates, if found qualified," and that "the movement, which was in advance of the age, was negatived in the Lower House." It is also claimed that this was "the initiative step in a series of efforts which have since resulted in the permanent establishment of flourishing State and National Associations, which separate the qualified physician from the 'ignorant pretender.'"

This is an interesting historical statement and, so far as it relates to Connecticut, is undoubtedly true. But it is by no means the initiative step or the earliest effort in the Colonies to organize the profession, or to regulate the practice of medicine. On June 27, 1766, eight years before the Connecticut rally, the following advertisement appeared in the *New York Mercury:*

"A considerable number of the Practitioners of Physic and Surgery, in East New Jersey, having agreed to form a Society for their mutual improvement, the advancement of the profession and promotion of the public good, and desirous of extending as much as possible the usefulness of their scheme, and of cultivating the utmost harmony and friendship with their brethren, hereby request and invite every gentleman of the profession in the province, that may approve of their design, to attend their first meeting, which will be held at Mr. Duff's, in the city of New Brunswick, on Wednesday, the 23d of July, at which time and place the Constitution and Regulations of the Society are to be settled and subscribed.

"East New Jersey, June 27th, 1766."

On the day appointed, July 23, 1766, a large body of physicians met at New Brunswick, formed themselves into a Society to be known as the New Jersey Medical Society, adopted instruments of association and a constitution, and elected a president, secretary and treasurer. Regular meetings were held twice a year the records of which are in possession of the Society.

In 1771, the Society petitioned the Assembly for an act regulating the practice of medicine, and on Sept. 26, 1772,

the act was passed. This act required an examination in physics and surgery, approved of, and admitted by any two judges of the Supreme Court, taking to their assistance for the examination such proper persons as they should deem fit, and the Court gave a certificate of examination, without which any one (except those licensed by the crown or physicians from other Colonies) practicing in the Colony was liable to a fine. It also legalized physicians' fees.

In 1774, an effort was made by the Society to procure a charter, which was delayed by the Revolution, but granted by the State in 1790. There was an intermission of the regular meetings of the Society from 1775 to 1781, because the local situation of the war rendered it dangerous for members to travel through the Colony, and because, also, many of the members took an active part in the Revolution. As soon, however, as civil government was restored, the Society convened, Nov. 6, 1781, at Princeton. The complete records of the Society have been preserved since its organization in 1766, and the Medical Society of New Jersey claims to be the oldest State Medical Society in the United States, and among the first to secure an act from its Colonial Assembly to legalize and regulate the practice of medicine. The first State law regulating medical practice in New Jersey was passed in 1783. Very respectfully,

E. L. B. GODFREY, M.D.

Cheap Colleges.

SPOKANE, WASH., Sept. 26, 1893.

To the Editor:—My article published in THE JOURNAL of the 23d inst., was not intended as an advertisement of my qualifications, which I am proud to say are as good as can be obtained in the United States, but to call your attention to the false position you are putting our really good colleges by constantly advertising inferior ones. Until within the last two years the German universities would recognize tickets for time spent in some of our best schools, but now they refuse to so recognize time spent in any of them. They say they can not distinguish between the good and the poor schools, we have so many of them. And it seems natural that they should not when THE JOURNAL will not.

I hope to see the day when a "Yankee" M.D. degree will rank with any obtained in Europe and it seems to me that one of the first steps toward attaining that end will be for THE JOURNAL to refuse to recognize in any way, any but our very best colleges and universities. We have in the United States, about one hundred and forty colleges and universities granting the degree of M.D.; probably forty of those have such facilities for teaching medicine as ought to entitle them to recognition anywhere. The others are run for revenue only, or to advertise the faculty connected with them or both, and they should be ignored by the AMERICAN MEDICAL ASSOCIATION and its JOURNAL, or if noticed at all only to call attention to the fact that they are a disgrace to the profession, and that their course does not meet with the approval of the better element of the profession here.

Yours, D. C. NEWMAN.

As this letter related to the business management of THE JOURNAL, and involved a censorship of the colleges, it was handed to one of the Trustees to look over; that officer did not return it immediately, and the matter rested in his hands, and was not returned until the receipt of the following letter when its return was called for by the editor.

The elevation of the city of Spokane above the sea level makes ebullition easy, and our friend seemed to grow excited. He writes:

SPOKANE, WASH., Oct. 25, 1893.

Dear Sir:—In my article published in our JOURNAL of the 23d of September, you chose to slur me by a head line that newspaper men would count as entirely uncalled for and poor taste. I replied at once, but you continue your unprofessional tactics by refusing to publish the reply. You attempt to deceive me by not noticing it among Letters Received, but as the letter has not returned to me, of course you received it. I readily see that to publish such letters as mine would be bad politics, as many of the professors of these second and third class colleges and diploma mills have a voice in the AMERICAN MEDICAL ASSOCIATION, and are often elected to vice-presidencies; and as you are evidently in sympathy with these people and running THE JOURNAL for Dr. Hamilton, nothing else can be expected of you. So I inclose stamp for return of the manuscript.

Yours very truly,

D. C. NEWMAN.

American Women are Physically Degenerating.

WASHINGTON, D. C., October, 1893.

To the Editor:—In THE JOURNAL of October 21, Dr. Edmund Andrews of Chicago, takes up the article of Dr. Cyrus Edson on deterioration of American women, published in the October number of the *North American Review*, and gives us the the more cheerful if not the exact status of American motherhood.

With Dr. Andrews the wish is evidently father to the thought; for if we examine the facts as they are presented to us in everyday life, we find there is almost a unanimity of opinion among physicians, nurses and mothers of grown children, that women of the last two decades of years seem to suffer more, become sooner physically exhausted and are slower rallying from childbirth than their mothers before them.

Taking haphazard the names of some of those married within the last ten years, of my acquaintance, one can not but see a picture of suffering and invalidism, which leaves but little doubt that the present modus vivendi of lovely women is radically wrong. Is the wrong wrought "in the schools, where by ambition and by rewards for success and disgrace for failure, growing girls are goaded to a disastrous amount of mental strain and over brain work;" or must we go farther back, to the mothers of our present wives and blossoming maidens, when frequent and multitudinous child bearing was more common, and the style of tight lacing and high heels was in vogue; mothers then bringing into the world offspring whose uterine life was spent in a sub-involuted tissue and whose narrow confines were restricted and hampered.

Of the names of forty-eight mothers, some primiparæ, others multiparæ, all married within ten years, I find there are but twenty who may be said to enjoy as good health as before they were married. Of the remaining twenty-eight, seven died, incident to or following childbirth, five are bedridden, and the remaining sixteen have never regained their former good looks and health.

Our American women are pretty; as proportionately and beautifully formed as ever. They have the courage and will to carry them through long suffering; but too often the reserve physical force soon gives out even with little exertion, and leaves us to terminate a protracted labor as best we can. JAMES D. MORGAN, M.D.

Ohio Epileptic Asylum.

The following communication has been received, addressed "To the State and county officers and the public:"

I am advised by the Board of Trustees of the Ohio Hospital for Epileptics, that they are about ready to open for the admission of 250 male patients, but are not yet provided with the proper information to enable them to enumerate and classify the applicants for admission.

The probate court of each county has proper blank forms for application, and it is earnestly desired that all who seek the care of this institution shall call upon the probate judge and fill out these blanks and forward to Dr. H. C. Rutter, Manager, Gallipolis, O., at once. Very truly,

W. MCKINLEY, JR., Governor.

Is It a Swindle?

TOLEDO, OHIO, Oct. 28, 1893.

To the Editor:—Some months ago a lady representing herself as the granddaughter of Dr. McDowell, canvassed this and neighboring cities, taking orders for the "Biography of

McDowell." She represented that she needed the money, and most of those who subscribed paid cash. She must have received over fifty orders here, and several hundred each in Detroit and Cleveland, nearly all paying cash. We can not get any clue to her location nor can we get the books. The publisher says that the edition is exhausted and not paid for and of course will print no more.

Considering the *possible* magnitude of the swindle, I write to ascertain how to check it. If you desire it, can get the statements of those who paid in this city.

Yours truly, THOMAS HUBBARD,
Secretary, Ohio State Medical Society.

Objects to the Term "Jackass."

DETROIT, MICH., Oct. 25, 1893.

To the Editor:—The scientific language used in the argument by Dr. Solomon Solis-Cohen against Dr. John B. Roberts and his article, "The Similarity between Physicians and Homeopaths," is worthy of remark. His article is illiberal, un-American, and based upon an unscientific principle of thought. A principle of science that has been accepted by all civilization is true; but a principle of science which has not reached its perfection and its acceptance by the whole civilized world is not true, as yet. The paper, as a whole, was more suitable for a political gathering than a scientific society. No matter what ideas a man may have, he is never to be compared to a mule or a jackass. It is ungentlemanly to speak thus of a class of excellent men who are entitled to the respect of those who can not agree with them. LOUIS EDELMAN, M.D.

Proposed Change of Name.

CHATTANOOGA, TENN., Oct. 24, 1893.

To the Editor:—Apropos of your editorial, "Try a New Name," I would state that the Tri-State Medical Society of Alabama, Georgia and Tennessee will at its next meeting vote on a proposition to change the name to the Southeastern Medical Society. The next meeting will be held in Atlanta on the second Tuesday in October, 1894.

Fraternally,
FRANK TRESTER SMITH, Sec'y.

MISCELLANY.

Pittston, Pa. New Hospital.—A fine Cottage Hospital 88 x 44 feet, was opened October 24, at Pittston, Pa.

The College of Physicians and Surgeons of Richmond, Va., have purchased the Richmond City Hospital for $18,489.39.

Lowell, Mass., Hospital.—A nine thousand dollar addition is to be built to the Lowell, Mass., Hospital.

Robbed a Hospital.—A patient at the Louisville City Hospital, robbed the hospital October 19, of all the surgical instruments he could conveniently carry away. The thief was caught and most of the instruments recovered.

Rich Legacies for Hospitals.—The New York Hospital and the Presbyterian Hospital are among the residuary legatees of an estate, the proceeds of which, it is estimated, will yield $200,000 to each of these charities.

Reichenau Consumptive Hospital.—Baron Nathaniel Rothschild's plan of presenting the consumptives of Vienna with a castle at Reichenau has aroused great opposition in that neighborhood, which is a delightful summer resort. The landlords and others fear that the presence of so many sick people will drive away the guests who come there for pleasure. But the chief objection comes from the Emperor's brother, the Archduke Charles Louis, who quarrelled with the Baron some time ago because he declined to sell the castle to the Duke. When the money prince found that the Duke had set his heart on getting possession of the castle he straightway decided to convert it into a hospital.

New Hospital at Rhinelander, Wis.—The Sisters of Charity at Rhinelander, Wis., are to have a new hospital building that will cost $20,000.

A Dispensary Burned.—The dispensary of the New York Presbyterian Hospital was destroyed by fire October 21.

Change of Address.—Dr. Bayard Holmes to 104 East Fortieth Street, Chicago.

Want a Bacteriologist.—The Board of Health of Syracuse, N. Y., have asked the city council for the appointment of a bacteriologist to verify diagnoses of diphtheria.

Private Fire-Service in a Hospital.—A destructive hospital fire was probably prevented by a private apparatus, at the New York Presbyterian Dispensary. The conflagration was started early on a Sunday morning, in an underground apartment where turpentine and other combustibles were stored. The private fire apparatus was put in operation in a few minutes. The city fire engines came soon afterwards and with several streams of water pouring into the blazing storeroom, all danger from a spread of the flames was overpast in less than twenty minutes. The total loss on drugs and furniture in dispensary and drug room is estimated at $3,000. With a less degree of preparation, and a few minutes longer delay in handling the fire, the loss might readily have been quadrupled. A good private fire service in hospitals or asylums is a "modern improvement" that can not be overlooked or slighted.

Ohio Railway Surgeons.—At the meeting of the Ohio Railway Surgeons the following officers were elected for 1894: President, W. A. Ward of Conneaut; Vice-President, B. M. Ricketts, Cincinnati; Second Vice-President, W. S. Hay, Wellston. Chas. H. Mertz, Toledo, Secretary.

New York Quarantine Commission.—The Board of Quarantine Commissioners met in the Mayor's office October 18, and awarded to Colin McLean additional contracts for the improvement of buildings on Swinburne and Hoffman Islands, to the amount of $21,099. It also allowed Dr. Jenkins, $9,281 to pay bills contracted during the cholera scare of last year.

Tri-State Medical Journal.—Dr. James Moores Ball of Keokuk, Iowa, is to be the Editor-in-chief of a new medical journal, to be called the *Tri-State Medical Journal*. The initial number will appear December 1, and reappear each month thereafter.

The Medical Mirror and the Congress.—The St Louis *Medical Mirror* devotes the entire October number to the proceedings of the Pan-American Medical Congress. Among its other features of interest is a stenographic report of the speeches at the editors' banquet.

A Group of Connecticut Triplets.—A thirteen-year-old matron of Roxbury, has given birth to triplets—one boy and two girls—weighing in all twenty-three pounds. The age of the father is sixteen years. The mother is robust and developed beyond the average of girls of her age. She is the daughter of a farmer and her husband is a farm-hand.

A Venerable Pioneer Physician.—Dr. Frederick Andros, of Mitchell, S. D., claims to be the first authorized practitioner of medicine not only in Dubuque, Iowa, but also in the immense region west of the Mississippi River to the Pacific north of the Missouri River. He is a native of Massachusetts and now nearly 91 years of age.

Sick Men as Bank Assets.—The Metropolitan National Bank of Kansas City, recently sued Mr. Frank E. Tyler of that city and attached his property. It seems that he was President of the Church Charity Association which established All Saints Hospital and had advanced that institution some $14,707.73, which on demand of the bank, the hospital was unable to pay. The bank therefore has come

into possession of the hospital full of sick, some trained nurses, and the apothecary shop.

Left a Baby for the Doctor, and a Nursing Bottle.—An elderly woman rang Dr. S. H. Blodgett's (Homeop.) doorbell at No. 88 Main St., Cambridge, and without heeding the servant's statement that the doctor and his wife were at the World's Fair, she walked into the office, and leaving a three-weeks-old infant on the floor, walked out again. The woman then went to a drug store near by and left an order to have a nursing bottle sent to Dr. Blodgett's house, after which she disappeared.

Appointment.—Dr. William Townsend Porter, Professor of Physiology at the St. Louis Medical College, has accepted the offer made him in September of the Chair of Assistant Professor of Physiology at Harvard Medical School, Boston, Mass. Early in December Dr. Porter will bid adieu to St. Louis, and assume the duties of his new post.

Dr. Porter has spent most of his life in St. Louis. He was graduated from the St. Louis Medical College in 1885, returned to it as assistant professor of physiology in 1887 and became full professor in 1888.

The Sponge Choking Case Sequel.—In our last issue we referred to a case where the patient had choked to death during a surgical operation at Syracuse, N. Y.

The coroner held an inquest of which the following is the press report:

"The jury was composed of Adam Klink, Maurice Nelligan, Henry Bruns, John Conroy, Charles F. Bronners, Ludwig Trage, jr., William Hammerle, Edwin Collins, William Schillinger and John Gebhardt.

"Some very impertinent questions were asked during the course of the examination. Juryman William Shillinger being especially pointed in his inquiries. The question of carelessness hinged upon whether or not Dr. Harding was responsible for the sponge coming off the wire while he was clearing out the patient's throat. Dr. D. M. Totman, who conducted the Kanaley operation, and all who were present at that operation say that no blame can be attached to Dr. Harding. He is a thoroughly capable physician and was attending strictly to his business when the accident occurred. However the jury seemed to think that the sponge was either rotten or insecurely fastened to the wire forceps, and they rather blame Dr. Harding for this carelessness. The verdict in full was:

"'We find that Patrick Kanaley of Jordan, N. Y., came to his death while undergoing an operation at St. Joseph's Hospital, accidentally by respiration swallowing a sponge necessarily used at the time by an attendant. While we do not desire to censure the authorities of St. Joseph's Hospital we do call attention to the careless manner in which an assistant physician performed his specified duty.'"

"Those examined on the stand were Dr. D. M. Totman, Dr. J. H. Goff of Cazenovia, who was present at the operation, Dr. E. V. Crane, senior house physician of St. Joseph's Hospital, where the operation was performed, Dr. Harding and Charles Coville, a medical student.

"The doctors who conducted the operation have concluded that Kanaley must have first swallowed the sponge and then in vomiting raised it so that it passed into his windpipe."

THE PUBLIC SERVICES.

Army Medical School.—In accordance with orders from the War Department, published in THE JOURNAL of July 8 last, the session of the Army Medical School will open at the Army Medical Museum, Washington, D. C., on Wednesday, November 1. The daily order of duties will be as follows: 9 A.M. to 12 M., pathological laboratory; 1 P.M. to 2.30 P.M. chemical laboratory; 3 P.M. to 4 P.M., lecture in assembly room.

On Mondays, Wednesdays and Fridays, from 11.30 A.M. to 12 M. during November, at the Museum Building, and on Saturdays from 9.30 to 10.30 A.M. at the Hospital Corps School, Washington Barracks, D. C., practical instruction will be given in litter and ambulance drill and in first aid.

The lecture course will embrace the following subjects: Duties of Medical Officers by Assistant Surgeon General Alden on Wednesdays, throughout the session, from 3 to 4 P.M. Military Surgery, care of wounded in time of war, and hospital administration, by Deputy Surgeon General Forwood, on Thursdays throughout the session, from 3 to 4 P.M. Military Hygiene, by Surgeon Billings, on Fridays throughout the session from 3 to 4 P.M. Military Medicine by Surgeon Smart, on Mondays throughout the session from 3 to 4 P.M. It is expected that some of the lectures on military medicine and also lectures on bacteriology will be given by the Surgeon General. The lecture hour from 3 to 4 P.M. on Tuesdays will be reserved for certain auxiliary courses the dates of which have not as yet been announced. These will be of great interest and value to the young officers of the Medical Department. Military law will be the subject of one of these courses to be given by Major George B. Davis, Judge Advocate, U. S. ARMY. Major Davis was formerly assistant professor of military law at the U. S. Military Academy, West Point, N. Y., and is the author of a highly valued work on International Law. For some time past he has been Chairman of the Board of Publication of the Official Records of the War of the Rebellion. A knowledge of military law and its procedures must be acquired by Army medical officers as they are subject to assignment for court martial duty. The students of the Army Medical School are therefore to be congratulated on having Major Davis as their instructor on this subject. Dr. Robert Fletcher, whose long experience as a teacher of medical jurisprudence in the Columbian University of Washington, D. C., will give value to his course, is expected to lecture on this subject, probably in February. Dr. Fletcher's name is well known in medical literary circles by his connection with the editorship of the *Index Medicus*. Prof. C. W. Stiles of the Department of Agriculture, has kindly consented to lecture on human parasites, and Capt. J. C. Merrill of the Medical Department of the Army, will complete the course by an outline of comparative anatomy, giving special attention to points connected with the anatomy of the horse, and introducing to the members of his class those venomous reptiles and insects that they will probably meet in the course of their future service in the West.

Army Changes. Official list of changes in the stations and duties of officers serving in the Medical Department, U. S. Army, from October 21, 1893, to October 27, 1893.

Lieut. Col. ALBERT HARTSUFF, Deputy Surgeon General, is relieved from duty at Ft. Omaha, Neb., and ordered to report in person to the commanding General, Department of California, for duty as Medical Director of that Department, to relieve Col. JOSEPH R. SMITH, Asst. Surgeon General. Col. SMITH, on being relieved by Lieut. Col. HARTSUFF, will proceed to Governor's Island, N. Y., and report in person on December 4 to the Commanding General, Department of the East, for duty as Medical Director of that Department.

Dr. Benjamin H. Kidder, Medical Inspector U. S. N. has received his promotion to Medical Director.

Marine Hospital Changes. Official list of changes of stations and duties of medical officers of the U. S. Marine Hospital Service, for the five weeks ended October 21, 1893.

Surgeon C. D. FESSENDEN, granted leave of absence for thirty days. Oct. 4, 1893.

Surgeon P. H. BAILHACHE, detailed as delegate to meeting of American Public Health Association, Oct. 5, 1893.

Surgeon JOHN VANSANT, granted leave of absence for thirty days, Sept. 25, 1893.

Surgeon H. H. HUTTON, detailed as chairman of board to inspect Gulf Quarantine Station, Oct. 17, 1893.

Surgeon J. B. HAMILTON, granted leave of absence for three days, Oct. 2, 1893.

Surgeon J. M. GASSAWAY, detailed as member of board to inspect Gulf Quarantine Station, Oct. 17, 1893.

Surgeon F. W. MEAD, to rejoin station (Washington, D. C.), Sept. 19, 1893.

Surgeon H. R. CARTER, to proceed to Way Cross, Ga., for temporary duty, Oct. 4, 1893.

P. A. Surgeon P. C. KALLOCH, granted leave of absence for twenty days, Oct. 9, 1893.

P. A. Surgeon S. D. BROOKS, to proceed to Chicago, Ill., for temporary duty, Sept. 19, 1893.

P. A. Surgeon H. T. GOODWIN, granted leave of absence for thirty days, Sept. 27, 1893.

P. A. Surgeon J. O. COBB, granted leave of absence for thirty days, Oct. 11, 1893.

P. A. Surgeon G. M. GUITERAS, detailed as recorder of board to inspect Gulf Quarantine Station, Oct. 17, 1893.

P. A. Surgeon C. P. WERTENBAKER, granted leave of absence for seven days, Sept. 26, 1893.

P. A. Surgeon J. C. PERRY, granted leave of absence for seven days, Oct. 5, 1893.

Asst. Surgeon C. H. GARDNER, to proceed to Port Townsend, Wash., for temporary duty, Oct. 7, 1893.

Asst. Surgeon J. N. HODGER, to proceed to Way Cross, Ga., for temporary duty, Oct. 8, 1893.

Asst. Surgeon SEATON NORMAN, granted leave of absence for four days, Oct. 4, 1893.

Asst. Surgeon E. K. SPRAGUE, granted leave of absence for three days, Oct. 7, 1893.

LETTERS RECEIVED.

(**A**) Ayer, N. W. & Son, Philadelphia, Pa.; Atkinson, W. B., Philadelphia, Pa.; (**B**) Baldwin, J. G., Philadelphia, Pa.; Brayton, P. B., Syracuse, N. Y.; Bernd, Henry & Co., St. Louis, Mo.; Brainard, Nellie U., Osage, Iowa; Baker, H. B., Lansing, Mich.; Bates and Morse Ad'v. Agency, New York, N. Y.; Bachmann, C. F. jr., Allegheny, Pa.; Brush, E. F., Mt. Union, N. Y.; Ball, James M., Keokuk, Iowa; (**C**) Conkling, G., Glen Falls, N. Y.; Clark, E. S., San Francisco, Cal.; Cincinnati Sanitarium, College Hill, Ohio; Coates, Truman, Russellville, Pa.; (**D**) Dobson, H. L., Ashland, Me.; Drevet M'f'g. Co., New York, N. Y.; Davis, R. C., Ann Arbor, Mich.; (**E**) Ely, J. S., Barnesville, Ohio; (**F**) Freidenwald, A., Baltimore, Md.; Fehr, Julius, Hoboken, N. J.; (**G**) Goelet Augustin H., New York, N. Y.; Guild, W. H. & Co., Boston, Mass.; Goss, J. H., Athens, Ga.; (**H**) Hummel & Parmele, Philadelphia, Pa.; Heath, W. P., St. Louis, Mo.; (**I**) Ingals, E. F., Chicago, Ill.; (**J**) Jeffery, A. F., Denver, Col.; (**L**) Lea Brothers & Co., Philadelphia, Pa.; Le Mond, Robt. F., Denver, Col.; (**M**) Mullen, A. J., St. Louis, Mo.; Malin, M. D., Chicago, Ill.; Morrison, Plummer & Co., Chicago, Ill.; Montizambert, F., Quebec, Canada; (**P**) Parsons, F. S., Landower, Pa.; Parker, Richmond, Va.; (**R**) Roedel, H. H., Lebanon, Pa.; Rogers, S. F., Troy, N. Y.; Rumbold, Thos. F., San Francisco, Cal.; (**S**) Stokes, W. B., Coldwater, Ky.; Scherer, Otto, Detroit, Mich.; (**T**) Thompson, R. L., Spokane, Wash.; Tuley, H. E., Louisville, Ky; Topliff, C. L., New York, N. Y.; Trowbridge, L. S. Detroit, Mich.; (**W**) Western News Co., Chicago, Ill.; Wright, John, Clinton, Ill.; Warner, W. R. & Co., Philadelphia, Pa.; Winslow, C. E., Albuquerque, N. M.